

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

INDIANAPOLIS

OFFICE MEMORANDUM

DATE: March 26, 2010

TO: Jaworski, Mark, OLQ SI THRU: Admire, Beth, OLC
Hauer, Gabriele, OLQ SI

FROM: Smith, Jim R., OLC, NRDA

SUBJECT: Gary Development Landfill Site, Gary, Lake County, Indiana
Modification of December 9, 2009 Memorandum

The Indiana Department Environmental Management (IDEM) Natural Resource Damages (NRD) Program was asked to respond to questions and provide updates to the rare, threatened or endangered species memorandum produced on December 9, 2009 for the Gary Development Landfill site. Specific comment to be addressed was:

Smith 12/9/09 Memo:

*Subject Line needs to be changed from USS Lead to Gary Development
Some of the species listed in the IN1985 BBA are not listed in the
IN2005 BBA. Why should we be considering the IN1985 species as
affected sensitive environments?
Please make sure the natural areas being evaluated are contiguous to
the Grand Calumet River. The initial review with the B&W maps
concluded that the Natural Areas to be included are
43,44,45,46,47,48,49,50 and 70.*

Response: After discussion with U.S. EPA staff the following were determined: subject line has been corrected as reflected in attachment of corrected memorandum. IN1985 BBA is currently being updated by Indiana Department of Natural Resources; however, BBA Block Highland-2, which contains the Gary Development site is not a primary Block being evaluated. The BBA Block, Highland-1 which is immediately west of the Gary Development site is the primary BBA Block and only incidental observations from Block Highland-2 would be included in the 2005-2011 update. To date, no updates to the IN2010 BBA have been recorded or posted to the website. NRD Program staff was requested to evaluate Rare, Threatened and Endangered Species within the BBA Blocks relative to the Gary Development Landfill. Tables 2 and 3 of the attached December 9, 2009 Memorandum provides a listing of these species within the BBA Blocks Highland-1 and Highland-2: species are listed by occurrence on Natural Areas within the respective blocks (see map numbers in Figure 3 for specific locations). Figures 2 and 3 have

been modified to reflect clarifying suggestions. These Figures have been replaced in the attached memo and are attached as separate PDF files for ease of transmittal as color copies to U.S. EPA. Table 1 of the memo lists all occurrences of Rare, Threatened and Endangered species within 1.5 miles of the Gary Development Landfill site (Figure 3 was modified to reflect this buffer around the site).

Attachments (3)

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DATE: December 9, 2009

TO: Jaworski, Mark, OLQ SI THRU: Admire, Beth, OLC
Hauer, Gabriele, OLQ SI

FROM: Smith, Jim R., OLC, NRDA

SUBJECT: Gary Development Landfill Site, Gary, Lake County, Indiana

The Indiana Department Environmental Management (IDEM) Natural Resource Damages Program was asked to provide information relative to the use of the Gary Development Landfill site by Threatened and/or Endangered Species. This MEMO summarizes information relative to rare, threatened or endangered species use of habitat surrounding the Gary Development site in Gary, Lake County, Indiana.

I preface this discussion with the following information about rare, threatened and endangered species status in Indiana.

- 1). ***Endangered Species*** are identified and protected by law in Indiana at:
IC 14-22-34 Chapter 34. Nongame and Endangered Species Conservation

IC 14-22-34-1 "Endangered species" defined

Sec. 1. (a) As used in this chapter, "endangered species" means any species or subspecies of wildlife whose prospects of survival or recruitment within Indiana are in jeopardy or are likely within the foreseeable future to become so due to any of the following factors:

(1) The destruction, drastic modification, or severe curtailment of the habitat of the wildlife.

(2) The overutilization of the wildlife for scientific, commercial, or sporting purposes.

(3) The effect on the wildlife of disease, pollution, or predation.

(4) Other natural or manmade factors affecting the prospects of survival or recruitment within
Indiana.

(5) Any combination of the factors described in subdivisions (1) through (4).

(b) The term includes the following:

(1) Any species or subspecies of fish or wildlife appearing on the United States list of endangered native fish and wildlife (50 CFR 17, Appendix D).

(2) Any species or subspecies of fish and wildlife appearing on the United States

list of endangered foreign fish and wildlife (50 CFR 17, Appendix A).

- 2) **Threatened Species** are not defined nor protected directly by Indiana's Law, but development of rules by Indiana Department of Natural Resources (provided for in the Law) does address different definitions of **Species of Special Concern, Rare, or Threatened**. The Term Threatened is defined in IDNR's Fish and Wildlife Rule as follows.

312 IAC 9-1-14 "Threatened species" defined

Authority: IC 14-11-2-1; IC 14-22-2-6

Affected: IC 14-22

Sec. 14. "Threatened species" means a species or subspecies of wild animal likely to become endangered within the foreseeable future, including all species or subspecies classified as threatened by the federal government which occur in Indiana. (*Natural Resources Commission; 312 IAC 9-1-14; filed May 12, 1997, 10:00 a.m.: 20 IR 2699; readopted filed Jul 28, 2003, 12:00 p.m.: 27 IR 286*)

- 3) **Species of Special Concern** are defined and Rare, Threatened and Endangered plants and invertebrates are afforded protection by Non-Rule Policy adopted and amended by Indiana Natural Resources Commission at:

NATURAL RESOURCES COMMISSION Information Bulletin #2 (Fourth Amendment) August 1, 2007 (<http://www.in.gov/legislative/iac/20070815-IR-312070469NRA.xml.html>).

Exerts from this publication follow:

"INDIANA CLASSIFICATIONS

This section sets forth the classifications used in Indiana for wild animals, including **mammals, birds, reptiles, amphibians, fish, mollusks, and crustaceans**. The classifications used for insects and plants are set forth in Section IV(G) and Section V respectively.

"Endangered" means any animal species or subspecies whose prospects for survival or recruitment within the state are in immediate jeopardy and are in danger of disappearing from the state. This includes all species classified as endangered by the federal government that occur in Indiana.

"Special Concern" means an animal species requiring monitoring because of known or suspected vulnerability, limited abundance, or distribution in Indiana or a change in legal status or required habitat of the species of animal has occurred.

INSECTS

1. **Extirpated**: An insect is considered state extirpated if any of the following three conditions occur: (a) A species is declared extirpated by a specialist for the species, family, or order to which the insect belongs. (b) A species has not been located in Indiana as a naturally occurring breeding population for more than 15 years, but the species exists outside Indiana as a wild population. (c) A species appears on a federal list as being extirpated in Indiana.

2. **Endangered**: An insect species is considered state endangered if its prospects for

survival or recruitment within Indiana are in immediate jeopardy, and is in danger of disappearing from the state, where any of the following three conditions occur: (a) A species which may occur in Indiana is classified as endangered by the federal government. (b) A species is biologically dependent on a threatened or endangered plant species. (c) A species is known from fewer than five sites in Indiana. An insect is also considered endangered if the insect is listed as extirpated but is later rediscovered in Indiana, whether the population is endemic or believed to be recently adventive. The discovery of any life stage of an extirpated or endangered species is fiduciary evidence that a population exists. An endangered species of insect does not include any of the following: (a) A species that is not known as a population in Indiana but which ranges into the state from Michigan, Ohio, Illinois, or Kentucky. (b) A nonregulated adventive species. (c) A species regulated under [IC 14-24](#) and [312 IAC 18-3](#) (including a species used for biological control).

3. **Threatened:** A state threatened species is one which is likely to become endangered within the foreseeable future, where any of the following three conditions occur: (a) A species which occurs in Indiana is classified as threatened by the federal government. (b) A species is biologically dependent upon a rare or threatened plant species. (c) A species is known from six to 10 sites in Indiana. The discovery of a single life stage in situ is fiduciary evidence that a population exists. A threatened species does not include accidentals, adventive nonregulated species, nor any species subject to [IC 14-24](#) and [312 IAC 18-3](#) (including a species used for biological control).

4. **Rare:** A state rare insect species is a species where problems of limited abundance or distribution in Indiana are known or reasonably suspected including the following: (a) A species that is known to be rare in Michigan, Ohio, Illinois, or Kentucky. (b) A species that is biologically dependent upon a rare plant species. A rare species references an established population. A rare species does not include accidentals, adventive nonregulated species, or other species regulated under [IC 14-24](#) and [312 IAC 18-3](#) (including species used for biological control).

VASCULAR PLANTS

1. **Extirpated:** A plant species that is believed to be originally native to Indiana but without any currently known populations within the state.

2. **Endangered:** A species of plant that is known to occur currently on five or fewer sites in Indiana.

3. **Threatened:** A species of plant known to occur currently on six to 10 sites in Indiana.

4. **Rare:** A species of plant known to occur currently on 11 to 20 sites.”

Definitions outlined above are utilized in the following regarding the status of habitat known to be used by State designated endangered or threatened species.

Biological Communities and Threatened and Endangered Species surrounding the Gary Development Landfill

The Indiana Department of Natural Resources (2009) Natural Heritage Data Base provided information on endangered, threatened and rare species reported and recorded at natural areas within 4 miles of the Gary Development Landfill site. The Natural Heritage Database illustrates a total of 34 endangered, 48 threatened, 124 rare and 5 special concern species have been recorded at suitable habitat within 1.5 mile of the Gary Development Landfill site in Gary, Indiana [Table 1](#). More recent surveys have indicated an additional state endangered plant species, *Carex atherodes* (Rothrock 2007b) and a state special concern amphibian, *Acris crepitans* (Resetar and Resetar 2008) have been recorded within 1.5 miles of the site. [Figure 1](#) illustrates managed and natural areas surrounding the Gary Development site where most of the State-listed species have been recorded.

An examination of Indiana Breeding Bird Atlas (BBA) information for 1985-1990 and 2005-2010 indicated that the Upland Sandpiper (*Bartramia longicauda*) has been the only State Endangered bird species recorded in the Highland-2 BBA Block; the block that Gary Development Landfill is within (see [Figure 2](#)). However, an examination of Indiana Natural Heritage Database indicate records of 7 endangered bird species, 8 endangered insect species, 3 endangered reptiles 1 endangered mammal and 17 endangered vascular plants occur within this BBA Block. A total of 36 State Endangered and 2 Federal Endangered species have been recorded within the block. Additionally, 91 State Rare, 4 State Species of Special Concern, 36 State Threatened and 3 Watch List species have been recorded within the Highland-2 BBA Block (see [Figure 3](#) and [Table 2](#)). It must be noted that the Highland-2 BBA Block was not, nor is it during the 2005-2010 BBA update, a primary Block. Rather, Highland-1 BBA Block is the closest primary Block utilized for the Indiana BBA (John Castrale, personal communication).

The Highland-1 BBA Block, the eastern edge of which is located within ¼ mile of the Gary Development landfill site had 6 State-listed birds recorded during the 1985 surveys (see [Figure 4](#)). Additionally, a total of 21 State Endangered Species, 55 State Rare Species, 27 State Threatened Species, 5 State Species of Special Concern and 5 State Watch List Species have been recorded within this adjacent BBA Block ([Table 3](#)).

Recent studies have documented additional sensitive species in area near the Gary Development Landfill site. Rothrock (2007a) conducted an assessment of plant communities associated with wetland shelves (riverine wetlands) along the Grand Calumet River in June 2007. Wetland 7 of this survey was located just upstreram of the Gary Development Landfill site adjacent and across the river from the Gary/Chicago International Airport. Rothrock (2007b) found the following:

The north shore bordering the Gary Airport property was dominated by *Typha* spp. in wettest zones and *Phragmites australis* in drier zones. A noteworthy slough containing a sedge meadow was uncovered (N41.61012 W87.40314). The area is an estimated 35 x 12 m and is oriented parallel to the River shoreline. It was the only site that recorded remnant natural quality (i.e., mean C > 3.5) and a PIBI above the poor level. At least 12 native hydrophyte species were observed including these conservative species: *Carex*

aquaticus, *C. utriculata*, *Scirpus cf. pedicellatus*, and *Thelypteris palustris*. Moreover, it had a colony of *Carex atherodes*, a species listed as state endangered.

The south shore of W7 was variously dominated by *Typha* spp. and *Phragmites australis*. An occasional individual plant belonging to a conservative species was observed. These included *Cicuta bulbifera* and *Rumex orbiculatus*; but overall native diversity was low.

During the 2007 riverine wetland shelves plant community assessment (Rothrock 2007a), marsh wrens (*Cisothorus palustris*) were observed flying from and perched on cattails at several locations along the Grand Calumet River including just upstream and across the river from the Gary Development Landfill site (Smith, personal communication). No marsh wrens were actually recorded using the Gary Development Landfill site.

Recent sighting of marsh wren (state endangered) and Bebb's sedge (state threatened) illustrate the potential importance of Gary Development Landfill site as habitat for sensitive species along the Grand Calumet River. The site is an important component of the Grand Calumet River corridor and could provide critical habitat linking state protected natural areas and the dispersal of rare, threatened or endangered species between and among these critical areas. Riverine remnants on the south, southeast and north sides of this site could, with restoration and management, provide habitat for numerous rare, threatened and endangered species as do the near adjacent Seidner Dune and Swale, Tolleston Ridges, DuPont Natural Areas, Ivanhoe Dune and Swale Nature Preserve, Cline Avenue Nature Preserve and the Beemsterboer Natural Area (Figure 1).

Rothrock (2007b) found several state listed plant species in lacustrine and/or palustrine wetlands near the Gary Development Landfill site. The following is a brief discussion of these species from his report:

Listed Species. – No federally threatened or endangered species were encountered in the study sites. At the State level, four listed species were observed.

1. *Carex bebbii* – Bebb's sedge was encountered in three wetlands – Dupont (zone 2), Ivanhoe Dune and Swale (both middle and south swale), and Seidner Dune and Swale (middle site). In summer 2007 this same species was reported at several additional sites on the Grand Calumet River itself. These results suggest that this northern, transcontinental species, though threatened in Indiana as a whole, is frequent in this local area near the Lake Michigan shore.

2. *Eleocharis geniculata* – Capitulate spike-rush is a diminutive, seed-bank species that has ephemeral occurrence on exposed mucky pond bottoms in the region near the Lake Michigan shore. It is considered State threatened. Small numbers of individuals were encountered at five wetlands in this investigation – Clark and Pine, Explorer's Triangle, Exxon-Mobil terminal (site 3), Gary Lagoon, and Lake Mary (zone2).

3. *Potamogeton friesii* – Fries' pondweed, a State threatened species, was evident as scattered patches at 5 of 12 sample points around the margin of Bongi Pond. No other submergent vascular plants were observed in these same waters.

Although no record of State Listed Rare, Threatened or Endangered Species actually occurring on the Gary Development Landfill site exists, the information presented above and in the Tables and Figures below illustrate the potential for their use on habitat restored on this site. The importance of the site for connectivity of habitats along the Grand Calumet River was also pointed out by Smith (2009).

Table 1. List of State-listed rare, threatened and endangered species within 1.5 miles of the Gary Development Landfill site, Gary, Lake County, Indiana.

TYPE_	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Bird	<i>Botaurus lentiginosus</i>	American Bittern		SE	1991-07-11
Bird	<i>Chlidonias niger</i>	Black Tern		SE	1991-06-25
Bird	<i>Rallus elegans</i>	King Rail		SE	1978-08
Bird	<i>Ixobrychus exilis</i>	Least Bittern		SE	1990-SU
Bird	<i>Cistothorus palustris</i>	Marsh Wren		SE	2000-06-10
Bird	<i>Bartramia longicauda</i>	Upland Sandpiper		SE	1994-05-21
Bird	<i>Rallus limicola</i>	Virginia Rail		SE	1991-07-11
Bird	<i>Xanthocephalus xanthocephalus</i>	Yellow-headed Blackbird		SE	1991-05-14
Insect Homoptera	<i>Prairiana kansana</i>	The Kansas Prairie Leafhopper		SE	2005
Insect Lepidoptera	<i>Oligia obtusa</i>	A Noctuid Moth		SE	2005
Insect Lepidoptera	<i>Phytometra ernestinana</i>	Ernestine's Moth		SE	2005
Insect Lepidoptera	<i>Lycaena xanthoides</i>	Great Copper		SE	2002
Insect Lepidoptera	<i>Lycaeides melissa samuelis</i>	Karner Blue	LE	SE	2008-07-18
Insect Lepidoptera	<i>Hesperia ottoe</i>	Ottoe Skipper		SE	1995-06-28
Insect Lepidoptera	<i>Erynnis persius persius</i>	Persius Dusky Wing		SE	2005
Insect Lepidoptera	<i>Aethes patricia</i>			SE	2005
Mammal	<i>Spermophilus franklinii</i>	Franklin's Ground Squirrel		SE	1994-08-03
Reptile	<i>Emydoidea blandingii</i>	Blanding's Turtle		SE	2007-06-01
Reptile	<i>Clemmys guttata</i>	Spotted Turtle		SE	2009-06-28
Vascular Plant	<i>Geranium bicknellii</i>	Bicknell Northern Crane's-bill		SE	1903-06-15
Vascular Plant	<i>Buchnera americana</i>	Bluehearts		SE	2004
Vascular Plant	<i>Aralia hispida</i>	Bristly Sarsaparilla		SE	1880-06
Vascular Plant	<i>Cornus canadensis</i>	Bunchberry		SE	1878-05
Vascular Plant	<i>Satureja glabella var. angustifolia</i>	Calamint		SE	1906-08

TYPE_	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Vascular Plant	<i>Orobanche fasciculata</i>	Clustered Broomrape		SE	2007-05-28
Vascular Plant	<i>Ludwigia sphaerocarpa</i>	Globe-fruited False-loosestrife		SE	1952-08-09
Vascular Plant	<i>Spiranthes magnicamporum</i>	Great Plains Ladies'-tresses		SE	2004
Vascular Plant	<i>Cirsium hillii</i>	Hill's Thistle		SE	2008-07-08
Vascular Plant	<i>Carex atherodes</i> *	Awned Sedge (Wheat Sedge)		SE	2007
Vascular Plant	<i>Carex limosa</i>	Mud Sedge		SE	1895-06-30
Vascular Plant	<i>Thuja occidentalis</i>	Northern White Cedar		SE	1978-07-12
Vascular Plant	<i>Ceanothus herbaceus</i>	Prairie Redroot		SE	1903-05-30
Vascular Plant	<i>Amelanchier humilis</i>	Running Serviceberry		SE	1985
Vascular Plant	<i>Potamogeton pulcher</i>	Spotted Pondweed		SE	1897-06-21
Vascular Plant	<i>Sisyrinchium montanum</i>	Strict Blue-eyed-grass		SE	1986
Vascular Plant	<i>Equisetum variegatum</i>	Variegated Horsetail		SE	1955-08-31
High Quality Natural (	Prairie -sand mesic	Mesic Sand Prairie		SG	1978-07-23
High Quality Natural (	Prairie -sand wet	Wet Sand Prairie		SG	1978-07-23
High Quality Natural (	Prairie -sand wet-mesic	Wet-mesic Sand Prairie		SG	1980
High Quality Natural (	Forest -floodplain wet-mesic	Wet-mesic Floodplain Forest		SG	1978-07
High Quality Natural (	Lake -pond	Pond		SG	1978-07-23
High Quality Natural (	Prairie -sand dry	Dry Sand Prairie		SG	1978-07
High Quality Natural (	Prairie -sand dry-mesic	Dry-mesic Sand Prairie		SG	1978-07-11
High Quality Natural (	Savanna -sand dry	Dry Sand Savanna		SG	1978-07
High Quality Natural (	Savanna -sand dry-mesic	Dry-mesic Sand Savanna		SG	1978-07-23
High Quality Natural (	Savanna -sand mesic	Mesic Sand Savanna		SG	1978-07-23
High Quality Natural (	Wetland -marsh	Marsh		SG	1978-07
High Quality Natural (	Wetland -meadow sedge	Sedge Meadow		SG	1978-07
High Quality Natural (	Wetland -panne	Panne		SG	1984-12
High Quality Natural (	Wetland -swamp shrub	Shrub Swamp		SG	1978-07-23

TYPE_	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Insect Orthoptera	<i>Hesperotettix viridis pratensis</i>	A Grasshopper		SR	2005
Insect Homoptera	<i>Chlorotettix fallax</i>	A Leafhopper		SR	2005
Insect Homoptera	<i>Mesamia nigridorsum</i>	A Leafhopper		SR	2005
Insect Homoptera	<i>Philaenarcys killa</i>	Great Lakes dune spittlebug		SR	2005
Insect Homoptera	<i>Polyamia caperata</i>	Little Bluestem Polyamia		SR	2005
Insect Homoptera	<i>Prosapia ignipectus</i>	Red-legged Spittle Bug		SR	2005
Insect Homoptera	<i>Flexamia pyrops</i>	The Long-nose Three-awn Leafhopper		SR	2005
Insect Homoptera	<i>Bruchomorpha extensa</i>	The Long-nosed Elephant Hopper		SR	2005
Insect Homoptera	<i>Bruchomorpha dorsata</i>			SR	2005
Insect Homoptera	<i>Graminella mohri</i>			SR	2005
Insect Homoptera	<i>Laevincephalus acus</i>			SR	2005
Insect Lepidoptera	<i>Semiothisa eremiata</i>	The Goat's Rue Looper		SR	2005
Insect Lepidoptera	<i>Polites mystic</i>	Long Dash Skipper		SR	2005
Insect Lepidoptera	<i>Papaipema rigida</i>	A Borer Moth		SR	2005
Insect Lepidoptera	<i>Semiothisa mellistrigata</i>	A Geometrid Moth		SR	2005
Insect Lepidoptera	<i>Agrotis vetusta</i>	A Moth		SR	2005
Insect Lepidoptera	<i>Lesmone detrahens</i>	A Moth		SR	2005
Insect Lepidoptera	<i>Leucania inermis</i>	A Moth		SR	2005
Insect Lepidoptera	<i>Macrochilo absorptalis</i>	A Moth		SR	2005
Insect Lepidoptera	<i>Lemmeria digitalis</i>	A Noctuid Moth		SR	2005
Insect Lepidoptera	<i>Lodopepla u-album</i>	A Noctuid Moth		SR	2005
Insect Lepidoptera	<i>Macrochilo hypocritalis</i>	A Noctuid Moth		SR	2005
Insect Lepidoptera	<i>Melipotis jucunda</i>	A Noctuid Moth		SR	2005
Insect Lepidoptera	<i>Apamea nigrior</i>	Black-dashed Apamea		SR	2005
Insect Lepidoptera	<i>Metanema determinata</i>	Dark Metanema		SR	2005
Insect Lepidoptera	<i>Coenochroa illibella</i>	Dune Panic Grass Moth		SR	2005
Insect Lepidoptera	<i>Satyrodes eurydice</i>	Eyed Brown		SR	2008-07-10
Insect Lepidoptera	<i>Peoria gemmatella</i>	Gemmed Cordgrass Borer		SR	2005

TYPE_	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Insect Lepidoptera	<i>Melanomma auricinctaria</i>	Huckleberry Eye-spot Moth		SR	2002
Insect Lepidoptera	<i>Hypenodes caducus</i>	Large Hypenodes		SR	2005
Insect Lepidoptera	<i>Hesperia leonardus</i>	Leonard's Skipper		SR	2005
Insect Lepidoptera	<i>Poanes massasoit</i>	Mulberry Wing Skipper		SR	2005
Insect Lepidoptera	<i>Thorybes pylades</i>	Northern Cloudywing		SR	2005
Insect Lepidoptera	<i>Lycaena helloides</i>	Purplish Copper		SR	2005
Insect Lepidoptera	<i>Leucania linita</i>	Salt Marsh Wainscot		SR	2005
Insect Lepidoptera	<i>Protorthodes incincta</i>	Saturn quaker		SR	2005
Insect Lepidoptera	<i>Euphyes dion</i>	Sedge Skipper		SR	2004-07-09
Insect Lepidoptera	<i>Spartiniphaga inops</i>	Spartina Borer Moth		SR	2005
Insect Lepidoptera	<i>Pygarctia spraguei</i>	Sprague's Pygartic		SR	2005
Insect Lepidoptera	<i>Grammia figurata</i>	The Figured Grammia		SR	2005
Insect Lepidoptera	<i>Sphinx luscitiosa</i>	The Luscious Willow Sphinx		SR	2004-06-24
Insect Lepidoptera	<i>Trichosilia manifesta</i>	The Record Keeper Moth		SR	2002
Insect Lepidoptera	<i>Grammia phyllira</i>	The Sand Barrens Grammia		SR	2005
Insect Lepidoptera	<i>Pyrausta laticlavata</i>	The Southern Purple Mint Moth		SR	2005-05-12
Insect Lepidoptera	<i>Papaipema Iysimachiae</i>	The St. John'Swort Borer Moth		SR	2000-09-05
Insect Lepidoptera	<i>Anepia capsularis</i>	The Starry Champion Capsule Moth		SR	2005
Insect Lepidoptera	<i>Cyenia inopinatus</i>	The Unexpected Milkweed Moth		SR	2005
Insect Lepidoptera	<i>Acronicta dactylina</i>			SR	2005
Insect Lepidoptera	<i>Ancylis semiovana</i>			SR	2005
Insect Lepidoptera	<i>Crambus bidens</i>			SR	2005
Insect Lepidoptera	<i>Croesia semipurpurana</i>			SR	2005
Insect Lepidoptera	<i>Eucosma bilineana</i>			SR	2005
Insect Lepidoptera	<i>Eucosma fulminana</i>			SR	2005
Insect Lepidoptera	<i>Eucosma giganteana</i>			SR	2005
Insect Lepidoptera	<i>Grammia virguncula</i>			SR	2005
Insect Lepidoptera	<i>Nola cilicoides</i>			SR	2005

TYPE_	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Insect Lepidoptera	<i>Peoria tetradella</i>			SR	2005
Insect Lepidoptera	<i>Phaneta ochroterminana</i>			SR	2005
Insect Lepidoptera	<i>Phaneta olivaceana</i>			SR	2005
Insect Lepidoptera	<i>Phaneta raracana</i>			SR	2005
Insect Lepidoptera	<i>Phaneta striatana</i>			SR	2005
Insect Lepidoptera	<i>Phaneta umbrastriana</i>			SR	2005
Insect Lepidoptera	<i>Scirpophaga perstrialis</i>			SR	2005
Insect Lepidoptera	<i>Thorybes pylades</i>	Northern Cloudywing		SR	2008-07-18
Insect Lepidoptera	<i>Spilosoma latipennis</i>	The Red-legged Tussock Moth		SR	2005
Insect Lepidoptera	<i>Pyrausta laticlavata</i>	The Southern Purple Mint Moth		SR	2005
Insect Odonata	<i>Sympetrum semicinctum</i>	Band-winged Meadowhawk		SR	2005
Insect Orthoptera	<i>Hesperotettix viridis pratensis</i>	A Grasshopper		SR	2005
Insect Orthoptera	<i>Neoconocephalus nebrascensis</i>	A Katydid		SR	2005-07-24
Insect Orthoptera	<i>Orphulella pelidna</i>	Green Desert Grasshopper		SR	2005
Insect Orthoptera	<i>Melanoplus fasciatus</i>	Huckleberry Spur-throat Grasshopper		SR	2005
Insect Orthoptera	<i>Melanoplus keeleri luridus</i>	Keeler's Spur-throated Grasshopper		SR	2005
Insect Orthoptera	<i>Pardalophora phoenicoptera</i>	Orange-winged Grasshopper		SR	2005
Insect Orthoptera	<i>Conocephalus saltans</i>	Prairie Meadow Katydid		SR	2005
Insect Orthoptera	<i>Psinidia fenestralis</i>	Sand Locust		SR	2005
Insect Orthoptera	<i>Chloealtis conspersa</i>	Sprinkled Locust		SR	2005
Vascular Plant	<i>Melampyrum lineare</i>	American Cow-wheat		SR	1907-07
Vascular Plant	<i>Juncus balticus var. littoralis</i>	Baltic Rush		SR	1991
Vascular Plant	<i>Rhus aromatica var. arenaria</i>	Beach Sumac		SR	2007-07-12
Vascular Plant	<i>Arctostaphylos uva-ursi</i>	Bearberry		SR	2007-06-18
Vascular Plant	<i>Polygonella articulata</i>	Eastern Jointweed		SR	1955-08-31
Vascular Plant	<i>Carex eburnea</i>	Ebony Sedge		SR	1986-07-15
Vascular Plant	<i>Tofieldia glutinosa</i>	False Asphodel		SR	1986-08-25
Vascular Plant	<i>Prunus pensylvanica</i>	Fire Cherry		SR	1989-05-12

TYPE_	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Vascular Plant	<i>Carex aurea</i>	Golden-fruited Sedge		SR	2007-06-26
Vascular Plant	<i>Pinus banksiana</i>	Jack Pine		SR	2004
Vascular Plant	<i>Triglochin palustris</i>	Marsh Arrow-grass		SR	1896-08-28
Vascular Plant	<i>Arenaria stricta</i>	Michaux's Stitchwort		SR	2008-06-10
Vascular Plant	<i>Eriophorum angustifolium</i>	Narrow-leaved Cotton-grass		SR	1991
Vascular Plant	<i>Diervilla lonicera</i>	Northern Bush-honeysuckle		SR	1999-09-07
Vascular Plant	<i>Solidago ptarmicoides</i>	Prairie Goldenrod		SR	1995-12-28
Vascular Plant	<i>Utricularia purpurea</i>	Purple Bladderwort		SR	2004
Vascular Plant	<i>Comus rugosa</i>	Roundleaf Dogwood		SR	1920-07
Vascular Plant	<i>Aster borealis</i>	Rushlike Aster		SR	1985-07-11
Vascular Plant	<i>Spiranthes lucida</i>	Shining Ladies'-tresses		SR	1934-06
Vascular Plant	<i>Aristida intermedia</i>	Slim-spike Three-awn Grass		SR	1991-08-12
Vascular Plant	<i>Platanthera psycodes</i>	Small Purple-fringe Orchis		SR	1928-08-04
Vascular Plant	<i>Cypripedium calceolus</i> var. <i>parviflorum</i>	Small Yellow Lady's-slipper		SR	1989-05-24
Vascular Plant	<i>Scirpus subterminalis</i>	Water Bulrush		SR	1878-07-02
Vascular Plant	<i>Aster sericeus</i>	Western Silvery Aster		SR	1978-11
Vascular Plant	<i>Gentiana alba</i>	Yellow Gentian		SR	2007-08-21
Vascular Plant	<i>Carex aurea</i>	Golden-fruited Sedge		SR	1991-07-02
Amphibian	<i>Ambystoma laterale</i>	Blue-spotted Salamander		SSC	2008-06-01
Amphibian	<i>Necturus maculosus</i>	Common mudpuppy		SSC	1986-07
Amphibian **	<i>Acris crepitans</i>	Western Cricket Frog		SSC	2008
Bird	<i>Buteo lineatus</i>	Red-shouldered Hawk		SSC	1978-08
Reptile	<i>Thamnophis proximus proximus</i>	Western Ribbon Snake		SSC	1991
Insect Lepidoptera	<i>Faronta rubripennis</i>	The Pine Streak		ST	2005
Insect Homoptera	<i>Paraphilaenus parallelus</i>	A Spittle Bug		ST	2005
Insect Homoptera	<i>Flexamia reflexus</i>	Indiangrass Flexamia		ST	2005

TYPE_	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Insect Homoptera	<i>Paraphlepsius maculosus</i>	Peppered Paraphlepsius Leafhopper		ST	2005
Insect Homoptera	<i>Polyamia herbida</i>	The Prairie Panic Grass Leafhopper		ST	2005
Insect Homoptera	<i>Cosmotettix bilineatus</i>	Two-lined cosmotettix		ST	2005
Insect Homoptera	<i>Paraphlepsius lobatus</i>			ST	2005
Insect Lepidoptera	<i>Eucrotopcnemis fimbriaris</i>	A Noctuid Moth		ST	2005
Insect Lepidoptera	<i>Apamea burgessi</i>	A Noctuid Moth		ST	2005
Insect Lepidoptera	<i>Capis curvata</i>	A Noctuid Moth		ST	2005
Insect Lepidoptera	<i>Eucrotopcnemis fimbriaris</i>	A Noctuid Moth		ST	2002
Insect Lepidoptera	<i>Rhodoecia aurantiago</i>	Aureolaria Seed Borer		ST	2005
Insect Lepidoptera	<i>Papaipema beeriana</i>	Beer's Blazing Star Borer Moth		ST	2005
Insect Lepidoptera	<i>Problema byssus</i>	Bunchgrass Skipper		ST	2005
Insect Lepidoptera	<i>Papaipema leucostigma</i>	Columbine Borer		ST	2005
Insect Lepidoptera	<i>Atrytonopsis hianna</i>	Dusted Skipper		ST	2005
Insect Lepidoptera	<i>Loxagrotis grotei</i>	Grote's Black-tipped Quaker		ST	2002
Insect Lepidoptera	<i>Tricholita notata</i>	Marked Noctuid		ST	2005
Insect Lepidoptera	<i>Meropleon ambifuscum</i>	Newman's Brocade		ST	2005
Insect Lepidoptera	<i>Euchloe olympia</i>	Olympia Marble		ST	1990-04-25
Insect Lepidoptera	<i>Papaipema maritima</i>	The Giant Sunflower Borer Moth		ST	2005
Insect Lepidoptera	<i>Fagitana littera</i>	The Marsh Fern Moth		ST	2005
Insect Lepidoptera	<i>Faronta rubripennis</i>	The Pine Streak		ST	2005
Insect Lepidoptera	<i>Platyperigea meralis</i>	The Rare Sand Quaker		ST	2005
Insect Lepidoptera	<i>Papaipema speciosissima</i>	The Royal Fern Borer Moth		ST	2005
Insect Lepidoptera	<i>Agrotis stigmata</i>			ST	2005
Insect Lepidoptera	<i>Archanara laeta</i>			ST	2005
Insect Lepidoptera	<i>Macrochilo louisiana</i>			ST	2005
Insect Lepidoptera	<i>Oncocnemis riparia</i>	The Dune Oncocnemis Moth		ST	2005
Insect Orthoptera	<i>Paroxya atlantica</i>	A Grasshopper		ST	2005
Insect Orthoptera	<i>Phoetaliotes nebrascensis</i>	Large-headed Grasshopper		ST	2005

TYPE_	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Insect Orthoptera	<i>Trimerotropis maritima</i>	The Dune Locust		ST	2005
Vascular Plant	<i>Carex bebbii</i>	Bebb's Sedge		ST	1991
Vascular Plant	<i>Eleocharis geniculata</i>	Capitate Spike-rush		ST	1991-08-12
Vascular Plant	<i>Carex crawei</i>	Crawe Sedge		ST	1991-06-13
Vascular Plant	<i>Cirsium pitcheri</i>	Dune Thistle	LT	ST	1909-06
Vascular Plant	<i>Carex garberi</i>	Elk Sedge		ST	1991-06-13
Vascular Plant	<i>Salix cordata</i>	Heartleaf Willow		ST	1898-06
Vascular Plant	<i>Utricularia cornuta</i>	Horned Bladderwort		ST	1916-08-26
Vascular Plant	<i>Platanthera hyperborea</i>	Leafy Northern Green Orchis		ST	2008-07-03
Vascular Plant	<i>Utricularia minor</i>	Lesser Bladderwort		ST	1897-06
Vascular Plant	<i>Coeloglossum viride</i> var. <i>virescens</i>	Long-bract Green Orchis		ST	NO DATE
Vascular Plant	<i>Corydalis sempervirens</i>	Pale Corydalis		ST	2008-05-22
Vascular Plant	<i>Agalinis skinneriana</i>	Pale False Foxglove		ST	2004
Vascular Plant	<i>Talinum rugospermum</i>	Prairie Fame-flower		ST	1915-08-22
Vascular Plant	<i>Carex richardsonii</i>	Richardson Sedge		ST	2004
Vascular Plant	<i>Juncus scirpoides</i>	Scirpus-like Rush		ST	1985-07-11
Vascular Plant	<i>Eriophorum gracile</i>	Slender Cotton-grass		ST	1934-06
Vascular Plant	<i>Solidago simplex</i> var. <i>gillmanii</i>	Sticky Goldenrod		ST	1900-08-04
Vascular Plant	<i>Shepherdia canadensis</i>	Canada Buffalo-berry		SX	1997-07-22
Vascular Plant	<i>Platanthera hookeri</i>	Hooker Orchis		SX	1893-06
Vascular Plant	<i>Linnaea borealis</i>	Twinflower		SX	1897-06-12
Vascular Plant	<i>Lechea stricta</i>	Upright Pinweed		SX	1881-09-10
Insect Lepidoptera	<i>Speyeria aphrodite</i>	Aphrodite Fritillary		WL	2005
Insect Lepidoptera	<i>Papaipema pterisii</i>	Bracken Borer Moth		WL	2005
Vascular Plant	<i>Juglans cinerea</i>	Butternut		WL	1989
Vascular Plant	<i>Selaginella apoda</i>	Meadow Spike-moss		WL	1991

TYPE_	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Vascular Plant	<i>Cypripedium candidum</i>	Small White Lady's-slipper		WL	1898-06
Bird	<i>Certhia americana</i>	Brown Creeper			1991-05-01
Insect Lepidoptera	<i>Notodonta scitipennis</i>	A Notodontid Moth			2005
Insect Lepidoptera	<i>Hyperaeschra georgica</i>	A Prominent Moth			2005
Insect Lepidoptera	<i>Schinia sanguinea</i>	Bleeding Flower Moth			1986
Insect Lepidoptera	<i>Tarachidia binocula</i>	Prairie tarachidia			2005
Reptile	<i>Ophisaurus attenuatus attenuatus</i>	Western Slender Glass Lizard			2005-06-03

Fed: **LE** = listed federal endangered; **LT** = listed federal threatened, **C** = federal candidate species

State: **SE** = state endangered; **ST** = state threatened; **SR** = state rare; sse = state species of special concern; **SG** = state significant;

WL = watch list; **no rank** = not ranked but tracked to monitor status

* Rothrock 2007b

** Resetar and Resetar 2008.

**Table 2. Rare, Threatened or endangered species occurring within BREEDING BIRD ATLAS BLOCK HIGHLAND-2
(Northeast Block of Highland Quadrangle)**

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
23					
Reptile	<i>Emydoidea blandingii</i>	Blanding's Turtle		SE	2000-04-07
Vascular Plant	<i>Cirsium pitcheri</i>	Dune Thistle	LT	ST	1909-06
24					
CLARK AND PINE NATURE PRESERVE					
High Quality Natural (	Prairie -sand wet-mesic	Wet-mesic Sand Prairie		SG	1980
High Quality Natural (	Prairie -sand dry	Dry Sand Prairie		SG	1978-07
High Quality Natural (	Prairie -sand dry-mesic	Dry-mesic Sand Prairie		SG	1978-07-11
High Quality Natural (	Wetland -marsh	Marsh		SG	1978-07
High Quality Natural (	Wetland -panne	Panne		SG	1984-12
Amphibian	<i>Ambystoma laterale</i>	Blue-spotted Salamander		SSC	1978-08
Bird	<i>Ixobrychus exilis</i>	Least Bittern		SE	1990-SU
Bird	<i>Rallus elegans</i>	King Rail		SE	1978-08
Bird	<i>Botaurus lentiginosus</i>	American Bittern		SE	1978-07
Bird	<i>Rallus limicola</i>	Virginia Rail		SE	1978-07-11
Mammal	<i>Spermophilus franklinii</i>	Franklin's Ground Squirrel		SE	1994-08-03
Reptile	<i>Clemmys guttata</i>	Spotted Turtle		SE	2005-06-05
Reptile	<i>Ophisaurus attenuatus attenuatus</i>	Western Slender Glass Lizard			1991-04-23
Reptile	<i>Clemmys guttata</i>	Spotted Turtle		SE	2009-06-28
Reptile	<i>Thamnophis proximus proximus</i>	Western Ribbon Snake		SSC	1987-06-06
Reptile	<i>Emydoidea blandingii</i>	Blanding's Turtle		SE	2007-03-29
Insect Lepidoptera	<i>Euphyes dion</i>	Sedge Skipper		SR	2005

**Table 2. Rare, Threatened or endangered species occurring within BREEDING BIRD ATLAS BLOCK HIGHLAND-2
(Northeast Block of Highland Quadrangle)**

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Insect Homoptera	<i>Paraphilaenus parallelus</i>	A Spittle Bug		ST	2005
Insect Homoptera	<i>Prairiana kansana</i>	The Kansas Prairie Leafhopper	|	SE	2005
Insect Homoptera	<i>Polyamia caperata</i>	Little Bluestem Polyamia		SR	2005
Insect Homoptera	<i>Philaenarcys killa</i>	Great Lakes dune spittlebug		SR	2005
Insect Homoptera	<i>Prosapia ignipectus</i>	Red-legged Spittle Bug		SR	2005
Insect Homoptera	<i>Flexamia pyrops</i>	The Long-nose Three-awn Leafhopper		SR	2005
Insect Homoptera	<i>Flexamia reflexus</i>	Indiangrass Flexamia		ST	2005
Insect Homoptera	<i>Bruchomorpha extensa</i>	The Long-nosed Elephant Hopper		SR	2005
Insect Lepidoptera	<i>Crambus bidens</i>			SR	2005
Insect Lepidoptera	<i>Papaipema pterisii</i>	Bracken Borer Moth		WL	2005
Insect Lepidoptera	<i>Papaipema speciosissima</i>	The Royal Fern Borer Moth		ST	2005
Insect Lepidoptera	<i>Phaneta olivaceana</i>			SR	2005
Insect Lepidoptera	<i>Phytometra ernestinana</i>	Ernestine's Moth	|	SE	1986-06-24
Insect Lepidoptera	<i>Oligia obtusa</i>	A Noctuid Moth	|	SE	2005
Insect Lepidoptera	<i>Pygarctia spraguei</i>	Sprague's Pygartic		SR	2005
Insect Lepidoptera	<i>Cynia inopinatus</i>	The Unexpected Milkweed Moth		SR	2005
Insect Lepidoptera	<i>Melipotis jucunda</i>	A Noctuid Moth		SR	2005
Insect Lepidoptera	<i>Papaipema leucostigma</i>	Columbine Borer		ST	2005
Insect Lepidoptera	<i>Metanema determinata</i>	Dark Metanema		SR	2005
Insect Lepidoptera	<i>Capis curvata</i>	A Noctuid Moth		ST	2005
Insect Lepidoptera	<i>Meropleon ambifuscum</i>	Newman's Brocade		ST	2005
Insect Lepidoptera	<i>Melanomma auricinctaria</i>	Huckleberry Eye-spot Moth		SR	2002
Insect Lepidoptera	<i>Macrochilo louisiana</i>			ST	2005
Insect Lepidoptera	<i>Papaipema beeriana</i>	Beer's Blazing Star Borer Moth		ST	2005

**Table 2. Rare, Threatened or endangered species occurring within BREEDING BIRD ATLAS BLOCK HIGHLAND-2
(Northeast Block of Highland Quadrangle)**

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Insect Lepidoptera	<i>Protorthodes incincta</i>	Saturn quaker		SR	2005
Insect Lepidoptera	<i>Phaneta umbrastriana</i>			SR	2005
Insect Lepidoptera	<i>Problema byssus</i>	Bunchgrass Skipper		ST	1985-06-29
Insect Lepidoptera	<i>Hypenodes caducus</i>	Large Hypenodes		SR	2005
Insect Lepidoptera	<i>Thorybes pylades</i>	Northern Cloudywing		SR	2005
Insect Lepidoptera	<i>Ancylis semiovana</i>			SR	2005
Insect Lepidoptera	<i>Hesperia ottoe</i>	Ottoe Skipper		SE	2005
Insect Lepidoptera	<i>Apamea burgessi</i>	A Noctuid Moth		ST	2005
Insect Lepidoptera	<i>Apamea nigrrior</i>	Black-dashed Apamea		SR	2005
Insect Lepidoptera	<i>Iodopepla u-album</i>	A Noctuid Moth		SR	2005
Insect Lepidoptera	<i>Anepia capsularis</i>	The Starry Campion Capsule Moth		SR	2005
Insect Lepidoptera	<i>Faronta rubripennis</i>	The Pine Streak		ST	2005
Insect Lepidoptera	<i>Grammia figurata</i>	The Figured Grammia		SR	2005
Insect Lepidoptera	<i>Eucosma fulminana</i>			SR	2005
Insect Lepidoptera	<i>Hesperia leonardus</i>	Leonard's Skipper		SR	2005
Insect Lepidoptera	<i>Eucrocnemis fimbriaris</i>	A Noctuid Moth		ST	2002
Insect Lepidoptera	<i>Agrotis vetusta</i>	A Moth		SR	2005
Insect Lepidoptera	<i>Trichosilia manifesta</i>	The Record Keeper Moth		SR	2002
Insect Lepidoptera	<i>Grammia phyllira</i>	The Sand Barrens Grammia		SR	2005
Insect Lepidoptera	<i>Leucania linita</i>	Salt Marsh Wainscot		SR	2005
Insect Lepidoptera	<i>Archana laeta</i>			ST	2005
Insect Lepidoptera	<i>Loxagrotis grotei</i>	Grote's Black-tipped Quaker		ST	2002
Insect Lepidoptera	<i>Lesmone detrahens</i>	A Moth		SR	2005
Insect Lepidoptera	<i>Leucania inermis</i>	A Moth		SR	2005

**Table 2. Rare, Threatened or endangered species occurring within BREEDING BIRD ATLAS BLOCK HIGHLAND-2
(Northeast Block of Highland Quadrangle)**

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Insect Lepidoptera	<i>Rhodoecia aurantiago</i>	Aureolaria Seed Borer		ST	2005
Insect Lepidoptera	<i>Lycaena xanthoides</i>	Great Copper	|	SE	2002
Insect Lepidoptera	<i>Macrochilo absorptalis</i>	A Moth		SR	2005
Insect Lepidoptera	<i>Macrochilo hypocritalis</i>	A Noctuid Moth		SR	2005
Insect Lepidoptera	<i>Atrytonopsis hianna</i>	Dusted Skipper		ST	2005
Insect Lepidoptera	<i>Schinia sanguinea</i>	Bleeding Flower Moth			1986
Insect Lepidoptera	<i>Lemmeria digitalis</i>	A Noctuid Moth		SR	2005
Insect Lepidoptera	<i>Semiothisa mellistrigata</i>	A Geometrid Moth		SR	2005
Insect Odonata	<i>Sympetrum semicinctum</i>	Band-winged Meadowhawk		SR	2005
Insect Orthoptera	<i>Psinidia fenestralis</i>	Sand Locust		SR	2005
Insect Orthoptera	<i>Paroxya atlantica</i>	A Grasshopper		ST	2005
Insect Orthoptera	<i>Phoetaliotes nebrascensis</i>	Large-headed Grasshopper		ST	2005
Insect Orthoptera	<i>Melanoplus keeleri luridus</i>	Keeler's Spur-throated Grasshopper		SR	2005
Insect Orthoptera	<i>Melanoplus fasciatus</i>	Huckleberry Spur-throat Grasshopper		SR	2005
Insect Orthoptera	<i>Orphulella pelidna</i>	Green Desert Grasshopper		SR	2005
Insect Orthoptera	<i>Conocephalus saltans</i>	Prairie Meadow Katydid		SR	2005
Insect Orthoptera	<i>Hesperotettix viridis pratensis</i>	A Grasshopper		SR	2005
Insect Orthoptera	<i>Pardalophora phoenicoptera</i>	Orange-winged Grasshopper		SR	2005
Vascular Plant	<i>Melampyrum lineare</i>	American Cow-wheat		SR	1907-07
Vascular Plant	<i>Orobanche fasciculata</i>	Clustered Broomrape	|	SE	1986-06-24
Vascular Plant	<i>Carex aurea</i>	Golden-fruited Sedge		SR	2004
Vascular Plant	<i>Carex garberi</i>	Elk Sedge		ST	1986-05
Vascular Plant	<i>Potamogeton pulcher</i>	Spotted Pondweed	|	SE	1897-06-21
Vascular Plant	<i>Carex eburnea</i>	Ebony Sedge		SR	1986-07-15

**Table 2. Rare, Threatened or endangered species occurring within BREEDING BIRD ATLAS BLOCK HIGHLAND-2
(Northeast Block of Highland Quadrangle)**

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Vascular Plant	<i>Platanthera hyperborea</i>	Leafy Northern Green Orchis		ST	2008-07-03
Vascular Plant	<i>Carex crawei</i>	Crawe Sedge		ST	1987
Vascular Plant	<i>Cornus canadensis</i>	Bunchberry	|	SE	1878-05
Vascular Plant	<i>Coeloglossum viride</i> var. <i>virescens</i>	Long-bract Green Orchis		ST	NO DATE
Vascular Plant	<i>Cirsium hillii</i>	Hill's Thistle	|	SE	1987-06-11
Vascular Plant	<i>Pinus banksiana</i>	Jack Pine		SR	2004
Vascular Plant	<i>Carex richardsonii</i>	Richardson Sedge		ST	2004
Vascular Plant	<i>Thuja occidentalis</i>	Northern White Cedar	|	SE	1898-06-28
Vascular Plant	<i>Amelanchier humilis</i>	Running Serviceberry	|	SE	1985
Vascular Plant	<i>Eriophorum angustifolium</i>	Narrow-leaved Cotton-grass		SR	1986
Vascular Plant	<i>Spiranthes magnicamporum</i>	Great Plains Ladies'-tresses	|	SE	2004
Vascular Plant	<i>Equisetum variegatum</i>	Variegated Horsetail	|	SE	1955-08-31
Vascular Plant	<i>Spiranthes lucida</i>	Shining Ladies'-tresses		SR	1934-06
Vascular Plant	<i>Aralia hispida</i>	Bristly Sarsaparilla	|	SE	1880-06
Vascular Plant	<i>Utricularia purpurea</i>	Purple Bladderwort		SR	2004
Vascular Plant	<i>Agalinis skinneriana</i>	Pale False Foxglove		ST	2004
Vascular Plant	<i>Tofieldia glutinosa</i>	False Asphodel		SR	1986-08-25
Vascular Plant	<i>Arctostaphylos uva-ursi</i>	Bearberry		SR	1985-07-11
Vascular Plant	<i>Utricularia minor</i>	Lesser Bladderwort		ST	1897-06
Vascular Plant	<i>Utricularia cornuta</i>	Horned Bladderwort		ST	1916-08-26
Vascular Plant	<i>Eriophorum gracile</i>	Slender Cotton-grass		ST	1934-06
Vascular Plant	<i>Triglochin palustris</i>	Marsh Arrow-grass		SR	1896-08-28
Vascular Plant	<i>Satureja glabella</i> var. <i>angustifolia</i>	Calamint	|	SE	1926-09
Vascular Plant	<i>Linnaea borealis</i>	Twinflower		SX	1897-06-12

**Table 2. Rare, Threatened or endangered species occurring within BREEDING BIRD ATLAS BLOCK HIGHLAND-2
(Northeast Block of Highland Quadrangle)**

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Vascular Plant	<i>Ludwigia sphaerocarpa</i>	Globe-fruited False-loosestrife		SE	1952-08-09
Vascular Plant	<i>Cypripedium candidum</i>	Small White Lady's-slipper		WL	1898-06
Vascular Plant	<i>Salix cordata</i>	Heartleaf Willow		ST	1898-06
Vascular Plant	<i>Buchnera americana</i>	Bluehearts		SE	2004
Vascular Plant	<i>Rhus aromatica</i> var. <i>arenaria</i>	Beach Sumac		SR	2004
Vascular Plant	<i>Cypripedium calceolus</i> var. <i>parviflorum</i>	Small Yellow Lady's-slipper		SR	1989-05-24
Vascular Plant	<i>Eleocharis geniculata</i>	Capitate Spike-rush		ST	1986
Vascular Plant	<i>Juncus balticus</i> var. <i>littoralis</i>	Baltic Rush		SR	1985-07-11
Vascular Plant	<i>Arenaria stricta</i>	Michaux's Stitchwort		SR	2004
Vascular Plant	<i>Solidago ptarmicoides</i>	Prairie Goldenrod		SR	1991-08-29
Vascular Plant	<i>Aristida intermedia</i>	Slim-spike Three-awn Grass		SR	1927-05-23
Vascular Plant	<i>Sisyrinchium montanum</i>	Strict Blue-eyed-grass		SE	1986
Vascular Plant	<i>Shepherdia canadensis</i>	Canada Buffalo-berry		SX	1997-07-22
Vascular Plant	<i>Juncus sCirpoides</i>	Scirpus-like Rush		ST	1985-07-11
Vascular Plant	<i>Scirpus subterminalis</i>	Water Bulrush		SR	1878-07-02
Vascular Plant	<i>Aster borealis</i>	Rushlike Aster		SR	1985-07-11
25					
High Quality Natural (Prairie -sand dry		Dry Sand Prairie		SG	1978-07
High Quality Natural (Prairie -sand dry-mesic		Dry-mesic Sand Prairie		SG	1978-07
High Quality Natural (Wetland -marsh		Marsh		SG	1978-07
High Quality Natural (Wetland -panne		Panne		SG	1978-07-11
Bird	<i>Ixobrychus exilis</i>	Least Bittern		SE	1978-07-11
Bird	<i>Chlidonias niger</i>	Black Tern		SE	1978-07-11
Bird	<i>Botaurus lentiginosus</i>	American Bittern		SE	1978-07

**Table 2. Rare, Threatened or endangered species occurring within BREEDING BIRD ATLAS BLOCK HIGHLAND-2
(Northeast Block of Highland Quadrangle)**

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Bird	<i>Rallus elegans</i>	King Rail		SE	1978-08
Bird	<i>Rallus limicola</i>	Virginia Rail		SE	1978-07
Mammal	<i>Spermophilus franklinii</i>	Franklin's Ground Squirrel		SE	1978-08
Vascular Plant	<i>Ceanothus herbaceus</i>	Prairie Redroot		SE	1903-05-30
Vascular Plant	<i>Eleocharis geniculata</i>	Capitate Spike-rush		ST	1991-08-12
Vascular Plant	<i>Cypripedium candidum</i>	Small White Lady's-slipper		WL	1897-05-29
Vascular Plant	<i>Eriophorum angustifolium</i>	Narrow-leaved Cotton-grass		SR	1982
Vascular Plant	<i>Comus rugosa</i>	Roundleaf Dogwood		SR	1920-07
Vascular Plant	<i>Juncus balticus</i> var. <i>littoralis</i>	Baltic Rush		SR	1991-08-13
Vascular Plant	<i>Eriophorum gracile</i>	Slender Cotton-grass		ST	1934-06
Vascular Plant	<i>Orobanche fasciculata</i>	Clustered Broomrape		SE	1926-06-21
Vascular Plant	<i>Cypripedium calceolus</i> var. <i>parviflorum</i>	Small Yellow Lady's-slipper		SR	1978-01-25
Vascular Plant	<i>Solidago ptarmicoides</i>	Prairie Goldenrod		SR	1991-08-29
Vascular Plant	<i>Spiranthes lucida</i>	Shining Ladies'-tresses		SR	1934-06-09
Vascular Plant	<i>Arctostaphylos uva-ursi</i>	Bearberry		SR	1978-01-25
Vascular Plant	<i>Platanthera hyperborea</i>	Leafy Northern Green Orchis		ST	1978-01
Vascular Plant	<i>Arenaria stricta</i>	Michaux's Stitchwort		SR	1978-01-25
Vascular Plant	<i>Aristida intermedia</i>	Slim-spike Three-awn Grass		SR	1991-08-12
Vascular Plant	<i>Carex aurea</i>	Golden-fruited Sedge		SR	1978-01-25
Vascular Plant	<i>Satureja glabella</i> var. <i>angustifolia</i>	Calamint		SE	1895-06-28
Vascular Plant	<i>Rhus aromatica</i> var. <i>arenaria</i>	Beach Sumac		SR	1923-07
Vascular Plant	<i>Carex crawei</i>	Crawe Sedge		ST	1956-06-26
Vascular Plant	<i>Pinus banksiana</i>	Jack Pine		SR	1978-07
Vascular Plant	<i>Agalinis skinneriana</i>	Pale False Foxglove		ST	1991-08-29

**Table 2. Rare, Threatened or endangered species occurring within BREEDING BIRD ATLAS BLOCK HIGHLAND-2
(Northeast Block of Highland Quadrangle)**

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Vascular Plant	<i>Utricularia minor</i>	Lesser Bladderwort		ST	1897-06
Vascular Plant	<i>Utricularia corn uta</i>	Horned Bladderwort		ST	1893-09-04
26					
High Quality Natural (Savanna -sand dry		Dry Sand Savanna		SG	1978-07
27					
High Quality Natural (Wetland -marsh		Marsh		SG	1978-07
High Quality Natural (Wetland -panne		Panne		SG	1978-07-11
Insect Odonata	<i>Sympetrum semicinctum</i>	Band-winged Meadowhawk		SR	1999
Vascular Plant	<i>Solidago ptarmicoides</i>	Prairie Goldenrod		SR	1991-08-12
Vascular Plant	<i>Arenaria stricta</i>	Michaux's Stitchwort		SR	2008-06-10
Vascular Plant	<i>Aristida intermedia</i>	Slim-spike Three-awn Grass		SR	1986-12-16
Vascular Plant	<i>Arctostaphylos uva-ursi</i>	Bearberry		SR	1991-08-12
Vascular Plant	<i>Aster sericeus</i>	Western Silvery Aster		SR	1978-11
29					
Vascular Plant	<i>Solidago simplex var. gillmanii</i>	Sticky Goldenrod		ST	1900-08-04
Vascular Plant	<i>Platanthera hookeri</i>	Hooker Orchis		SX	1893-06
Vascular Plant	<i>Lechea stricta</i>	Upright Pinweed		SX	1881-09-10
Vascular Plant	<i>Carex limosa</i>	Mud Sedge		SE	1895-06-30
Vascular Plant	<i>Talinum rugospermum</i>	Prairie Fame-flower		ST	1915-08-22
Vascular Plant	<i>Platanthera psycodes</i>	Small Purple-fringe Orchis		SR	1928-08-04
Vascular Plant	<i>Polygonella articulata</i>	Eastern Jointweed		SR	1955-08-31

**Table 2. Rare, Threatened or endangered species occurring within BREEDING BIRD ATLAS BLOCK HIGHLAND-2
(Northeast Block of Highland Quadrangle)**

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
30	PINE STATION NATURE PRESERVE				
Vascular Plant	<i>Orobanche fasciculata</i>	Clustered Broomrape	|	SE	2006-05-28
31					
Bird	<i>Cistothorus palustris</i>	Marsh Wren	|	SE	2000-06-10
32	PINE STATION NATURE PRESERVE				
Bird	<i>Ixobrychus exilis</i>	Least Bittern	|	SE	1991-06-08
Bird	<i>Rallus limicola</i>	Virginia Rail	|	SE	1991-05-14
Bird	<i>Cistothorus palustris</i>	Marsh Wren	|	SE	1991-07-29
Mammal	<i>Spermophilus franklinii</i>	Franklin's Ground Squirrel	|	SE	2005*
Reptile	<i>Thamnophis proximus proximus</i>	Western Ribbon Snake		SSC	2005-09-20
Reptile	<i>Emydoidea blandingii</i>	Blanding's Turtle	|	SE	2008-04-16
Reptile	<i>Sistrurus catenatus catenatus</i>	Eastern Massasauga	C	SE	1984
Reptile	<i>Ophisaurus attenuatus attenuatus</i>	Western Slender Glass Lizard			1990
Reptile	<i>Clemmys guttata</i>	Spotted Turtle	|	SE	2007-03-29
Insect Lepidoptera	<i>Atrytonopsis hianna</i>	Dusted Skipper		ST	1986
Insect Lepidoptera	<i>Capis curvata</i>	A Noctuid Moth		ST	1999
Vascular Plant	<i>Juncus balticus var. littoralis</i>	Baltic Rush		SR	1991-08-13
Vascular Plant	<i>Satureja glabella var. angustifolia</i>	Calamint	|	SE	2007-08-21
Vascular Plant	<i>Gentiana alba</i>	Yellow Gentian		SR	2008-09-09
Vascular Plant	<i>Carex crawei</i>	Crawe Sedge		ST	1991-08-13

Table 2. Rare, Threatened or endangered species occurring within BREEDING BIRD ATLAS BLOCK HIGHLAND-2 (Northeast Block of Highland Quadrangle)

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Vascular Plant	<i>Tofieldia glutinosa</i>	False Asphodel		SR	1991-08-13
Vascular Plant	<i>Arctostaphylos uva-ursi</i>	Bearberry		SR	1991-08-13
Vascular Plant	<i>Agalinis skinneriana</i>	Pale False Foxglove		ST	2007-08-21
Vascular Plant	<i>Eleocharis geniculata</i>	CaPitate Spike-rush		ST	1991-08-13
Vascular Plant	<i>Agalinis skinneriana</i>	Pale False Foxglove		ST	1990
Vascular Plant	<i>Solidago ptarmicoides</i>	Prairie Goldenrod		SR	1991-08-13
Vascular Plant	<i>Alnus rugosa</i>	Speckled Alder		WL	2008-07-09
Vascular Plant	<i>Buchnera americana</i>	Bluehearts	|	SE	2008-07-09
Vascular Plant	<i>Spiranthes magnicamporum</i>	Great Plains Ladies'-tresses	|	SE	2007-09-04
Vascular Plant	<i>Carex aurea</i>	Golden-fruited Sedge		SR	1991-06-14
Vascular Plant	<i>Melampyrum lineare</i>	American Cow-wheat		SR	1907-07-28
Vascular Plant	<i>Potamogeton pulcher</i>	Spotted Pondweed	|	SE	2000 Summ.
Vascular Plant	<i>Potamogeton pulcher</i>	Spotted Pondweed	|	SE	2007-05-10
Vascular Plant	<i>Carex garberi</i>	Elk Sedge		ST	1991-06-14
Vascular Plant	<i>Cirsium hillii</i>	Hill's Thistle	|	SE	1987
Vascular Plant	<i>Platanthera hyperborea</i>	Leafy Northern Green Orchis		ST	2008-06-17
Vascular Plant	<i>Carex richardsonii</i>	Richardson Sedge		ST	1956-05-19
Vascular Plant	<i>Cypripedium calceolus</i> var. <i>parviflorum</i>	Small Yellow Lady's-slipper		SR	1989-05-24
Vascular Plant	<i>Carex brunnescens</i>	Brownish Sedge	|	SE	1991-08-08
33					
High Quality Natural (	Prairie -sand wet-mesic	Wet-mesic Sand Prairie		SG	1978-07-20
High Quality Natural (	Savanna -sand dry-mesic	Dry-mesic Sand Savanna		SG	1978-07-20
Insect Lepidoptera	<i>Atrytonopsis hianna</i>	Dusted Skipper		ST	1994-06-03

**Table 2. Rare, Threatened or endangered species occurring within BREEDING BIRD ATLAS BLOCK HIGHLAND-2
(Northeast Block of Highland Quadrangle)**

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
34					
Insect Lepidoptera	<i>Lycaeides melissa samuelis</i>	Karner Blue	LE	SE	1994-07-28
Insect Lepidoptera	<i>Atrytonopsis hianna</i>	Dusted Skipper		ST	1994-06-03
35					
IVANHOE DUNE AND SWALE NATURE PRESERVE					
High Quality Natural (Savanna -sand mesic		Mesic Sand Savanna		SG	1978-07-23
High Quality Natural (Prairie -sand wet		Wet Sand Prairie		SG	1978-07-23
High Quality Natural (Prairie -sand dry-mesic		Dry-mesic Sand Prairie		SG	1978-07-23
High Quality Natural (Wetland -marsh		Marsh		SG	1978-07-23
High Quality Natural (Wetland -swamp shrub		Shrub Swamp		SG	1978-07-23
High Quality Natural (Savanna -sand dry-mesic		Dry-mesic Sand Savanna		SG	1978-07-23
Bird	<i>Certhia americana</i>	Brown Creeper			1991-05-01
Bird	<i>Rallus limicola</i>	Virginia Rail		SE	1991-04-18
Reptile	<i>Ophisaurus attenuatus attenuatus</i>	Western Slender Glass Lizard			1990
Insect Lepidoptera	<i>Lycaeides melissa samuelis</i>	Karner Blue	LE	SE	2008-07-18
Insect Lepidoptera	<i>Atrytonopsis hianna</i>	Dusted Skipper		ST	1994-06-03
36					
IVANHOE DUNE AND SWALE NATURE PRESERVE					
High Quality Natural (Prairie -sand mesic		Mesic Sand Prairie		SG	1978-07-23
High Quality Natural (Lake -pond		Pond		SG	1978-07-23
High Quality Natural (Prairie -sand dry-mesic		Dry-mesic Sand Prairie		SG	1978-07

**Table 2. Rare, Threatened or endangered species occurring within BREEDING BIRD ATLAS BLOCK HIGHLAND-2
(Northeast Block of Highland Quadrangle)**

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
High Quality Natural (Prairie -sand wet		Wet Sand Prairie		SG	1978-07
High Quality Natural (Savanna -sand dry-mesic		Dry-mesic Sand Savanna		SG	1978-07-23
High Quality Natural (Savanna -sand mesic		Mesic Sand Savanna		SG	1978-07-23
High Quality Natural (Wetland -marsh		Marsh		SG	1978-07
High Quality Natural (Wetland -swamp shrub		Shrub Swamp		SG	1978-07
Amphibian	<i>Ambystoma laterale</i>	Blue-spotted Salamander		SSC	2008-06-01
Reptile	<i>Emydoidea blandingii</i>	Blanding's Turtle		SE	1991-11-01
Insect Lepidoptera	<i>Problema byssus</i>	Bunchgrass Skipper		ST	1995-08-04
Vascular Plant	<i>Platanthera hyperborea</i>	Leafy Northern Green Orchis		ST	1985
Vascular Plant	<i>Diervilla lonicera</i>	Northern Bush-honeysuckle		SR	1985
Vascular Plant	<i>Prunus pensylvanica</i>	Fire Cherry		SR	1985
Vascular Plant	<i>Rhus aromatica var. arenaria</i>	Beach Sumac		SR	1985
Vascular Plant	<i>Juncus balticus var. littoralis</i>	Baltic Rush		SR	1985

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CLINE AVENUE NATURE PRESERVE

Reptile	<i>Emydoidea blandingii</i>	Blanding's Turtle		SE	2007-06-01
Insect Lepidoptera	<i>Papaipema leucostigma</i>	Columbine Borer		ST	2005
Insect Homoptera	<i>Graminella mohri</i>			SR	2005
Insect Homoptera	<i>Mesamia nigradorsum</i>	A Leafhopper		SR	2005
Insect Homoptera	<i>Prosapia ignipectus</i>	Red-legged Spittle Bug		SR	2005
Insect Homoptera	<i>Cosmotettix bilineatus</i>	Two-lined cosmotettix		ST	2005
Insect Homoptera	<i>Philaenarcys killa</i>	Great Lakes dune spittlebug		SR	2005
Insect Lepidoptera	<i>Semiothisa eremiata</i>	The Goat's Rue Looper		SR	2005

**Table 2. Rare, Threatened or endangered species occurring within BREEDING BIRD ATLAS BLOCK HIGHLAND-2
(Northeast Block of Highland Quadrangle)**

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Insect Lepidoptera	<i>Phaneta striatana</i>			SR	2005
Insect Lepidoptera	<i>Aethes patricia</i>			SE	2005
Insect Lepidoptera	<i>Papaipema maritima</i>	The Giant Sunflower Borer Moth		ST	2005
Insect Lepidoptera	<i>Croesia semipurpurana</i>			SR	2005
Insect Lepidoptera	<i>Eucosma fulminana</i>			SR	2005
Insect Lepidoptera	<i>Phaneta raracana</i>			SR	2005
Insect Lepidoptera	<i>Grammia phyllira</i>	The Sand Barrens Grammia		SR	2005
Insect Lepidoptera	<i>Macrochilo absorptalis</i>	A Moth		SR	2005
Insect Lepidoptera	<i>Macrochilo hypocritalis</i>	A Noctuid Moth		SR	2005
Insect Lepidoptera	<i>Phaneta olivaceana</i>			SR	2005
Insect Lepidoptera	<i>Peoria gemmatella</i>	Gemmed Cordgrass Borer		SR	2005
Insect Lepidoptera	<i>Lycaena helloides</i>	Purplish Copper		SR	2005
Insect Lepidoptera	<i>Protorthodes incincta</i>	Saturn quaker		SR	2005
Insect Lepidoptera	<i>Nola cilicoides</i>			SR	2005
Insect Lepidoptera	<i>Scirpophaga perstrialis</i>			SR	2005
Insect Lepidoptera	<i>Eucosma bilineana</i>			SR	2005
Insect Lepidoptera	<i>Poanes massasoit</i>	Mulberry Wing Skipper		SR	2005
Insect Lepidoptera	<i>Leucania linita</i>	Salt Marsh Wainscot		SR	2005
Insect Orthoptera	<i>Chloealtis conspersa</i>	Sprinkled Locust		SR	2005
Insect Orthoptera	<i>Conocephalus saltans</i>	Prairie Meadow Katydid		SR	2005
Vascular Plant	<i>Carex aurea</i>	Golden-fruited Sedge		SR	2007-06-26
38					
Insect Homoptera	<i>Chlorotettix fallax</i>	A Leafhopper		SR	2004-09-08

**Table 2. Rare, Threatened or endangered species occurring within BREEDING BIRD ATLAS BLOCK HIGHLAND-2
(Northeast Block of Highland Quadrangle)**

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Insect Lepidoptera	<i>Euphyes dion</i>	Sedge Skipper		SR	2004-07-09
Insect Lepidoptera	<i>Problema byssus</i>	Bunchgrass Skipper		ST	2003-07-11
Insect Lepidoptera	<i>Papaipema lysimachiae</i>	The St. John'Swort Borer Moth		SR	2000-09-05
Insect Lepidoptera	<i>Macrochilo louisiana</i>			ST	2004-06-22
Insect Lepidoptera	<i>Sphinx luscitiosa</i>	The Luscious Willow Sphinx		SR	2004-06-24
Insect Lepidoptera	<i>Pyrausta laticlavia</i>	The Southern Purple Mint Moth		SR	2005-05-12
Insect Lepidoptera	<i>Spartiniphaga inops</i>	Spartina Borer Moth		SR	2004-09-04
Insect Orthoptera	<i>Neoconocephalus nebrascensis</i>	A Katydid		SR	2005-07-24

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CLINE AVENUE NATURE PRESERVE

High Quality Natural (Prairie -sand dry-mesic	Dry-mesic Sand Prairie			SG	1978-07
High Quality Natural (Savanna -sand dry-mesic	Dry-mesic Sand Savanna			SG	1978-07-22
Vascular Plant <i>Diervilla lonicera</i>	Northern Bush-honeysuckle			SR	1978-07-22

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CLINE AVENUE NATURE PRESERVE

High Quality Natural (Wetland -swamp shrub	Shrub Swamp			SG	1978-07
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Amphibian <i>Necturus maculosus</i>	Common mudpuppy			SSC	1986-07
Mammal <i>Spermophilus franklinii</i>	Franklin's Ground Squirrel			SE	1986-09-10

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**Table 2. Rare, Threatened or endangered species occurring within BREEDING BIRD ATLAS BLOCK HIGHLAND-2
(Northeast Block of Highland Quadrangle)**

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
IVANHOE SOUTH					
High Quality Natural (Savanna -sand dry-mesic		Dry-mesic Sand Savanna		SG	1978-07-10
High Quality Natural (Savanna -sand mesic		Mesic Sand Savanna		SG	1978-07-10
Insect Lepidoptera	<i>Lycaeides melissa samuelis</i>	Karner Blue	LE	SE	2007-07-15
53					
Vascular Plant	<i>Diervilla lonicera</i>	Northern Bush-honeysuckle		SR	1999-09-07
54					
Insect Lepidoptera	<i>Lycaeides melissa samuelis</i>	Karner Blue	LE	SE	1974-SU
55					
Vascular Plant	<i>Aristida tuberculosa</i>	Sea beach Needlegrass		SR	1952-09-21
Vascular Plant	<i>Selaginella rupestris</i>	Ledge Spike-moss		ST	1952-09
Vascular Plant	<i>Carex crawei</i>	Crawe Sedge		ST	1949-06
Vascular Plant	<i>Juncus scirpoides</i>	Scirpus-like Rush		ST	1952-07-27
Vascular Plant	<i>Carex garberi</i>	Elk Sedge		ST	1949-06
Vascular Plant	<i>Polygonella articulata</i>	Eastern Jointweed		SR	1952-09-21
70					
Bird	<i>Bartramia longicauda</i>	Upland Sandpiper		SE	1994-05-21
Reptile	<i>Ophisaurus attenuatus attenuatus</i>	Western Slender Glass Lizard			1905-06-12
71					

**Table 2. Rare, Threatened or endangered species occurring within BREEDING BIRD ATLAS BLOCK HIGHLAND-2
(Northeast Block of Highland Quadrangle)**

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Mammal	<i>Spermophilus franklinii</i>	Franklin's Ground Squirrel		SE	1986-05-28
Insect Lepidoptera	<i>Hesperia ottoe</i>	Ottoe Skipper		SE	1995-07-08
Vascular Plant	<i>Juncus balticus</i> var. <i>littoralis</i>	Baltic Rush		SR	1991-08-13
Vascular Plant	<i>Arctostaphylos uva-ursi</i>	Bearberry		SR	1991-08-13
Vascular Plant	<i>Tofieldia glutinosa</i>	False Asphodel		SR	1991-08-13
Vascular Plant	<i>Spiranthes magnicamporum</i>	Great Plains Ladies'-tresses		SE	1991-08-29
Vascular Plant	<i>Carex richardsonii</i>	Richardson Sedge		ST	1991-08-13
Vascular Plant	<i>Solidago ptarmicoides</i>	Prairie Goldenrod		SR	1991-08-13
Vascular Plant	<i>Pinus banksiana</i>	Jack Pine		SR	1991-08-29
Vascular Plant	<i>Carex crawei</i>	Crawe Sedge		ST	1991-06-13
Vascular Plant	<i>Agalinis skinneriana</i>	Pale False Foxglove		ST	1991-08-29
Vascular Plant	<i>Carex aurea</i>	Golden-fruited Sedge		SR	1991-06-13
72					
Vascular Plant	<i>Juncus balticus</i> var. <i>littoralis</i>	Baltic Rush		SR	2007-07-12
Vascular Plant	<i>Sisyrinchium montanum</i>	Strict Blue-eyed-grass		SE	2007-07-12
Vascular Plant	<i>Rhus aromatica</i> var. <i>arenaria</i>	Beach Sumac		SR	2007-07-12

**Table 3. Rare, threatened and endangered species within BREEDING BIRD ATLAS BLOCK HIGHLAND-1
(Northwest Block of Highland Quadrangle).**

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
41					
TOLLESTON RIDGES NATURE PRESERVE					
High Quality Natural (Prairie -sand mesic		Mesic Sand Prairie		SG	1978-07-21
High Quality Natural (Savanna -sand dry-mesic		Dry-mesic Sand Savanna		SG	1978-07-21
High Quality Natural (Savanna -sand mesic'		Mesic Sand Savanna		SG	1978-07-21
High Quality Natural (Wetland -marsh		Marsh		SG	1978-07
Amphibian	<i>Ambystoma laterale</i>	Blue-spotted Salamander		SSC	2005-05-23
Bird	<i>Buteo lineatus</i>	Red-shouldered Hawk		SSC	1978-08
Bird	<i>Botaurus lentiginosus</i>	American Bittern		SE	1975
Mammal	<i>Spermophilus franklinii</i>	Franklin's Ground Squirrel		SE	1978
Reptile	<i>Emydoidea blandingii</i>	Blanding's Turtle		SE	2007-06-10
Insect Lepidoptera	<i>Lycaeides melissa samuelis</i>	Karner Blue	LE	SE	2008-07-18
Insect Lepidoptera	<i>Satyrodes eurydice</i>	Eyed Brown		SR	2008-07-10
Insect Lepidoptera	<i>Thorybes pylades</i>	Northern Cloudywing		SR	2008-07-18
Vascular Plant	<i>Carex aurea</i>	Golden-fruited Sedge		SR	1978-08-11
Vascular Plant	<i>Carex richardsonii</i>	Richardson Sedge		ST	1980-05
Vascular Plant	<i>Diervilla lonicera</i>	Northern Bush-honeysuckle		SR	1991-08-10
Vascular Plant	<i>Solidago simplex var. gillmanii</i>	Sticky Goldenrod		ST	1978-08-11
Vascular Plant	<i>Spiranthes lucida</i>	Shining Ladies'-tresses		SR	1989
Vascular Plant	<i>Prunus pensylvanica</i>	Fire Cherry		SR	1978-08
Vascular Plant	<i>Cypripedium calceolus var. parviflorum</i>	Small Yellow Lady's-slipper		SR	2004

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**Table 3. Rare, threatened and endangered species within BREEDING BIRD ATLAS BLOCK HIGHLAND-1
(Northwest Block of Highland Quadrangle).**

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
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Mammal	<i>Spermophilus franklinii</i>	Franklin's Ground Squirrel		SE	1992-08-09
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SEIDNER DUNE AND SWALE NATURE PRESERVE

Mammal	<i>Spermophilus franklinii</i>	Franklin's Ground Squirrel		SE	2002-09-04
Insect Lepidoptera	<i>Hesperia leonardus</i>	Leonard's Skipper		SR	2001
Insect Lepidoptera	<i>Grammia phyllira</i>	The Sand Barrens Grammia		SR	2001
Insect Lepidoptera	<i>Peoria gemmatella</i>	Gemmed Cordgrass Borer		SR	2001
Insect Lepidoptera	<i>Semiothisa eremiata</i>	The Goat's Rue Looper		SR	2001

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SEIDNER DUNE AND SWALE NATURE PRESERVE

Insect Homoptera	<i>Cosmotettix bilineatus</i>	Two-lined cosmotettix		ST	2003
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SEIDNER DUNE AND SWALE NATURE PRESERVE

Bird	<i>Cistothorus palustris</i>	Marsh Wren		SE	1987-06-06
Bird	<i>Chlidonias niger</i>	Black Tern		SE	1991-07-11
Bird	<i>Ardea alba</i>	Great Egret		SSC	1988-06-10
Vascular Plant	<i>Juncus balticus</i> var. <i>littoralis</i>	Baltic Rush		SR	2001

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DuPont Dune & Swale Natural Area

**Table 3. Rare, threatened and endangered species within BREEDING BIRD ATLAS BLOCK HIGHLAND-1
(Northwest Block of Highland Quadrangle).**

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
High Quality Natural (Wetland -marsh		Marsh		SG	1978-07
High Quality Natural (Wetland -meadow sedge		Sedge Meadow		SG	1978-07
Bird	<i>Rallus limicola</i>	Virginia Rail		SE	1991-07-11
Bird	<i>Cistothorus palustris</i>	Marsh Wren		SE	1991-09-15
Bird	<i>Botaurus lentiginosus</i>	American Bittern		SE	1991-07-11
Bird	<i>Ixobrychus exilis</i>	Least Bittern		SE	1991-07-11
Bird	<i>Chlidonias niger</i>	Black Tern		SE	1991-06-25
Bird	<i>Xanthocephalus xanthocephalus</i>	Yellow-headed Blackbird		SE	1991-05-14

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DuPont Dune & Swale Natural Area

Vascular Plant	<i>Gentiana alba</i>	Yellow Gentian		SR	2007-08-21
Vascular Plant	<i>Cirsium hillii</i>	Hill's Thistle		SE	2008-07-08

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DuPont Dune & Swale Natural Area

High Quality Natural (Prairie -sand wet-mesic		Wet-mesic Sand Prairie		SG	1978-07
Reptile	<i>Clemmys guttata</i>	Spotted Turtle		SE	2005-09-14
Insect Homoptera	<i>Bruchomorpha dorsata</i>			SR	2005
Insect Lepidoptera	<i>Atrytonopsis hianna</i>	Dusted Skipper		ST	2005
Insect Homoptera	<i>Chlorotettix fallax</i>	A Leafhopper		SR	2005
Insect Lepidoptera	<i>Papaipema maritima</i>	The Giant Sunflower Borer Moth		ST	2005
Insect Lepidoptera	<i>Spartiniphaga inops</i>	Spartina Borer Moth		SR	2005
Insect Lepidoptera	<i>Pyrausta laticlavata</i>	The Southern Purple Mint Moth		SR	2005

**Table 3. Rare, threatened and endangered species within BREEDING BIRD ATLAS BLOCK HIGHLAND-1
(Northwest Block of Highland Quadrangle).**

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Insect Lepidoptera	<i>Papaipema beeriana</i>	Beer's Blazing Star Borer Moth		ST	2005
Insect Homoptera	<i>Bruchomorpha extensa</i>	The Long-nosed Elephant Hopper		SR	2005
Insect Lepidoptera	<i>Peoria tetradella</i>			SR	2005
Insect Homoptera	<i>Polyamia herbida</i>	The Prairie Panic Grass Leafhopper		ST	2005
Insect Lepidoptera	<i>Problema byssus</i>	Bunchgrass Skipper		ST	2005
Insect Lepidoptera	<i>Platyperigea meralis</i>	The Rare Sand Quaker		ST	2005
Insect Lepidoptera	<i>Phytometra ernestinana</i>	Ernestine's Moth		SE	2005
Insect Lepidoptera	<i>Phaneta umbrastriana</i>			SR	2005
Insect Lepidoptera	<i>Phaneta olivaceana</i>			SR	2005
Insect Lepidoptera	<i>Macrochilo louisiana</i>			ST	2005
Insect Homoptera	<i>Prosapia ignipectus</i>	Red-legged Spittle Bug		SR	2005
Insect Homoptera	<i>Paraphlepsius maculosus</i>	Peppered Paraphlepsius Leafhopper		ST	2005
Insect Lepidoptera	<i>Faronta rubripennis</i>	The Pine Streak		ST	2005
Insect Lepidoptera	<i>Polites mystic</i>	Long Dash Skipper		SR	2005
Insect Homoptera	<i>Paraphlepsius lobatus</i>			ST	2005
Insect Lepidoptera	<i>Papaipema rigida</i>	A Borer Moth		SR	2005
Insect Homoptera	<i>Polyamia caperata</i>	Little Bluestem Polyamia		SR	2005
Insect Lepidoptera	<i>Protorthodes incincta</i>	Saturn quaker		SR	2005
Insect Lepidoptera	<i>Phaneta ochroterminana</i>			SR	2005
Insect Lepidoptera	<i>Tricholita notata</i>	Marked Noctuid		ST	2005
Insect Lepidoptera	<i>Ancylis semiovana</i>			SR	2005
Insect Lepidoptera	<i>Hyperaeschra georgica</i>	A Prominent Moth			2005
Insect Lepidoptera	<i>Grammia figurata</i>	The Figured Grammia		SR	2005
Insect Lepidoptera	<i>Leucania inermis</i>	A Moth		SR	2005

**Table 3. Rare, threatened and endangered species within BREEDING BIRD ATLAS BLOCK HIGHLAND-1
(Northwest Block of Highland Quadrangle).**

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Insect Lepidoptera	<i>Tarachidia binocula</i>	Prairie tarachidia			2005
Insect Lepidoptera	<i>Grammia virguncula</i>			SR	2005
Insect Lepidoptera	<i>Eucosma bilineana</i>			SR	2005
Insect Lepidoptera	<i>Lemmeria digitalis</i>	A Noctuid Moth		SR	2005
Insect Homoptera	<i>Laevincephalus acus</i>			SR	2005
Insect Lepidoptera	<i>Speyeria aphrodite</i>	Aphrodite Fritillary		WL	2005
Insect Lepidoptera	<i>Eucosma giganteana</i>			SR	2005
Insect Lepidoptera	<i>Erynnis persius persius</i>	Persius Dusky Wing		SE	2005
Insect Lepidoptera	<i>Hesperia leonardus</i>	Leonard's Skipper		SR	2005
Insect Lepidoptera	<i>Agrotis vetusta</i>	A Moth		SR	2005
Insect Lepidoptera	<i>Trichosilia manifesta</i>	The Record Keeper Moth		SR	2005
Insect Orthoptera	<i>Hesperotettix viridis pratensis</i>	A Grasshopper		SR	2005
Insect Lepidoptera	<i>Agrotis stigmata</i>			ST	2005
Insect Orthoptera	<i>Trimerotropis maritima</i>	The Dune Locust		ST	2005
Insect Lepidoptera	<i>Iodopepla u-album</i>	A Noctuid Moth		SR	2005
Insect Lepidoptera	<i>Hypenodes caducus</i>	Large Hypenodes		SR	2005
Insect Lepidoptera	<i>Eucrocnemis fimbriaris</i>	A Noctuid Moth		ST	2005
Insect Lepidoptera	<i>Metanema determinata</i>	Dark Metanema		SR	2005
Insect Lepidoptera	<i>Oncocnemis riparia</i>	The Dune Oncocnemis Moth		ST	2005
Insect Homoptera	<i>Flexamia reflexus</i>	Indiangrass Flexamia		ST	2005
Insect Lepidoptera	<i>Oligia obtusa</i>	A Noctuid Moth		SE	2005
Insect Lepidoptera	<i>Notodonta scitipennis</i>	A Notodontid Moth			2005
Insect Lepidoptera	<i>Coenochroa illibella</i>	Dune Panic Grass Moth		SR	2005
Insect Lepidoptera	<i>Aethes patricia</i>			SE	2005

**Table 3. Rare, threatened and endangered species within BREEDING BIRD ATLAS BLOCK HIGHLAND-1
(Northwest Block of Highland Quadrangle).**

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Insect Lepidoptera	<i>Leucania linia</i>	Salt Marsh Wainscot		SR	2005
Insect Lepidoptera	<i>Spilosoma latipennis</i>	The Red-legged Tussock Moth		SR	2005
Insect Odonata	<i>Sympetrum semicinctum</i>	Band-winged Meadowhawk		SR	2005
Insect Lepidoptera	<i>Meropleon ambifuscum</i>	Newman's Brocade		ST	2005
Insect Lepidoptera	<i>Apamea nigrrior</i>	Black-dashed Apamea		SR	2005
Insect Lepidoptera	<i>Acronicta dactylina</i>			SR	2005
Insect Lepidoptera	<i>Cynia inopinatus</i>	The Unexpected Milkweed Moth		SR	2005
Insect Lepidoptera	<i>Macrochilo hypocritalis</i>	A Noctuid Moth		SR	2005
Insect Lepidoptera	<i>Macrochilo absorptalis</i>	A Moth		SR	2005
Insect Lepidoptera	<i>Anepia capsularis</i>	The Starry Campion Capsule Moth		SR	2005
Insect Lepidoptera	<i>Lycaeides melissa samuelis</i>	Karner Blue	LE	SE	2008-07-09
Insect Lepidoptera	<i>Fagitana littera</i>	The Marsh Fern Moth		ST	2005
Insect Orthoptera	<i>Conocephalus saltans</i>	Prairie Meadow Katydid		SR	2005

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DuPont Dune & Swale Natural Area

High Quality Natural (Prairie -sand dry-mesic		Dry-mesic Sand Prairie		SG	1978-07
High Quality Natural (Savanna -sand dry		Dry Sand Savanna		SG	1978-07
Bird	<i>Rallus elegans</i>	King Rail		SE	1974-05-22
Mammal	<i>Spermophilus franklinii</i>	Franklin's Ground Squirrel		SE	1990-07-06
Reptile	<i>Emydoidea blandingii</i>	Blanding's Turtle		SE	1991
Vascular 'Plant	<i>Carex aurea</i>	Golden-fruited Sedge		SR	1991-07-02
Vascular Plant	<i>Eriophorum angustifolium</i>	Narrow-leaved Cotton-grass		SR	1991
Vascular Plant	<i>Carex bebbii</i>	Bebb's Sedge		ST	1991

**Table 3. Rare, threatened and endangered species within BREEDING BIRD ATLAS BLOCK HIGHLAND-1
(Northwest Block of Highland Quadrangle).**

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Vascular Plant	<i>Juncus balticus var. littoralis</i>	Baltic Rush		SR	1991
Vascular Plant	<i>Selaginella apoda</i>	Meadow Spike-moss		WL	1991
Vascular Plant	<i>Solidago ptarmicoides</i>	Prairie Goldenrod		SR	1992-08-22
50					
DuPont Dune & Swale Natural Area					
Vascular Plant	<i>Orobanche fasciculata</i>	Clustered Broomrape		SE	2007-05-28
58					
Insect Lepidoptera	<i>Metarranthia apiciaria</i>	Barrens Metarranthia Moth		SE	1904-07-01
Insect Coleoptera	<i>Nicrophorus americanus</i>	American Burying Beetle	LE	SX	1896
66					
High Quality Natural (Prairie -sand dry-mesic		Dry-mesic Sand Prairie		SG	1981-08-15
67					
High Quality Natural (Savanna -sand dry-mesic		Dry-mesic Sand Savanna		SG	1981-10-02
68					
ROXANA MARSH					
Amphibian	<i>Rana pipiens</i>	Northern Leopard Frog		SSC	1984
Bird	<i>Rallus limicola</i>	Virginia Rail		SE	1982-07-20
Bird	<i>Ixobrychus exilis</i>	Least Bittern		SE	1984-06-28

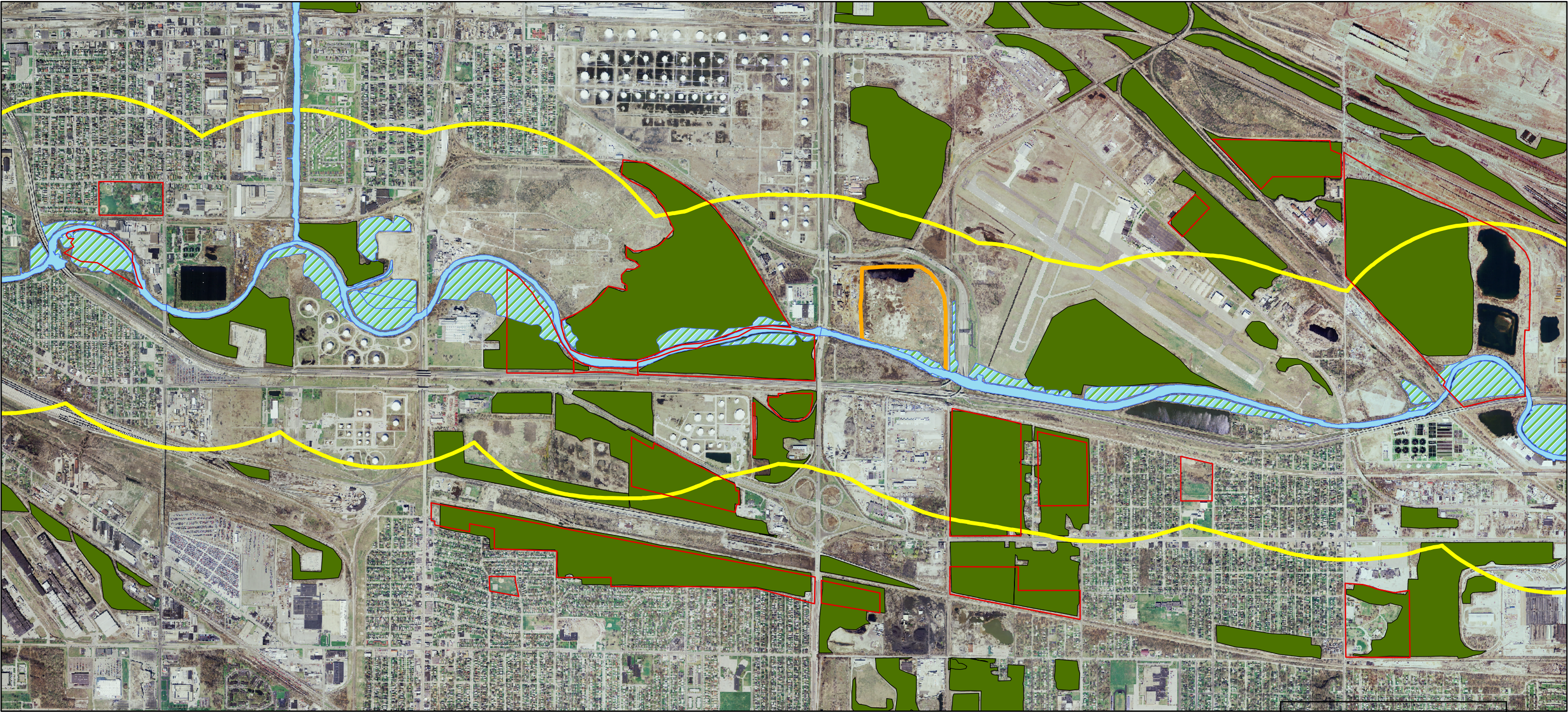
**Table 3. Rare, threatened and endangered species within BREEDING BIRD ATLAS BLOCK HIGHLAND-1
(Northwest Block of Highland Quadrangle).**

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Bird	<i>Chlidonias niger</i>	Black Tern		SE	1989-06-24
Bird	<i>Cistothorus palustris</i>	Marsh Wren		SE	1985-07
Bird	<i>Nycticorax nycticorax</i>	Black-crowned Night-heron		SE	1986-06-28
Bird	<i>Xanthocephalus xanthocephalus</i>	Yellow-headed Blackbird		SE	1986-06-21
Mammal	<i>Spermophilus franklinii</i>	Franklin's Ground Squirrel		SE	1985-07-02
69					
Mammal	<i>Spermophilus franklinii</i>	Franklin's Ground Squirrel		SE	1992-08-05
Reptile	<i>Emydoidea blandingii</i>	Blanding's Turtle		SE	1999-03*
73					
Amphibian	<i>Rana pipiens</i>	Northern Leopard Frog		SSC	1923-06-30
Insect Lepidoptera	<i>Schinia indiana</i>	Phlox Moth		SE	1940-05
74					
GIBSON WOODS NATURE PRESERVE					
High Quality Natural (Forest -floodplain wet-mesic		Wet-mesic Floodplain Forest		SG	1978-07
High Quality Natural (Wetland -swamp shrub		Shrub Swamp		SG	1978-07
High Quality Natural (Wetland -marsh		Marsh		SG	1978-07
High Quality Natural (Prairie -sand wet-mesic		Wet-mesic Sand Prairie		SG	1978-07-21
High Quality Natural (Prairie -sand dry-mesic		Dry-mesic Sand Prairie		SG	1978-07
High Quality Natural (Savanna -sand dry-mesic		Dry-mesic Sand Savanna		SG	1978-07-21
Bird	<i>Ixobrychus exilis</i>	Least Bittern		SE	1985-07-02
Mammal	<i>Spermophilus franklinii</i>	Franklin's Ground Squirrel		SE	1994-07-27

**Table 3. Rare, threatened and endangered species within BREEDING BIRD ATLAS BLOCK HIGHLAND-1
(Northwest Block of Highland Quadrangle).**

TYPE_ Map #	SPECIES NAME	COMMON NAME	FED	STATE	DATE
Reptile	<i>Thamnophis proximus proximus</i>	Western Ribbon Snake		SSC	1991
Reptile	<i>Ophisaurus attenuatus attenuatus</i>	Western Slender Glass Lizard			2005-06-03
Insect Lepidoptera	<i>Euchloe olympia</i>	Olympia Marble		ST	1990-04-25
Insect Lepidoptera	<i>Papaipema pterisii</i>	Bracken Borer Moth		WL	1992-07-09
Insect Lepidoptera	<i>Problema byssus</i>	Bunchgrass Skipper		ST	1990
Insect Lepidoptera	<i>Papaipema leucostigma</i>	Columbine Borer		ST	1990-09-11
Insect Lepidoptera	<i>Lycaeides melissa samuelis</i>	Karner Blue	LE	SE	1992-07-09
Vascular Plant	<i>Juglans cinerea</i>	Butternut		WL	1989
Vascular Plant	<i>Rhus aromatica</i> var. <i>aromatica</i>	Beach Sumac		SR	1989
Vascular Plant	<i>Prunus pensylvanica</i>	Fire Cherry		SR	1989-05-12
Vascular Plant	<i>Satureja glabella</i> var. <i>angustifolia</i>	Calamint		SE	1906-08
Vascular Plant	<i>Carex aurea</i>	Golden-fruited Sedge		SR	1978-01-25
Vascular Plant	<i>Corydalis sempervirens</i>	Pale Corydalis		ST	2008-05-22
Vascular Plant	<i>Cypripedium calceolus</i> var. <i>parviflorum</i>	Small Yellow Lady's-slipper		SR	1991-08-10
Vascular Plant	<i>Diervilla lonicera</i>	Northern Bush-honeysuckle		SR	1991-08-10

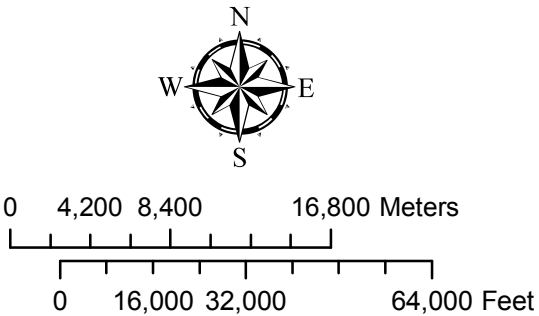
Figure 1. Natural Features along Grand Calumet River provide unique habitat corridor from Gary to Hammond.



This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Mapped By:
Dr. Jim Smith, Office of Land Quality - NRD Program
Date:03/25/2010

Sources:
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83



- Legend**
- Managed_Lands
 - GCR_IHC_IH
 - Gary_Development_site
 - Riverine_Wetlands
 - AOC-Dune&Swale
 - AOC_boundaries
 - GCR_Buffer



Results by Block

Draft Results Summary for 8322/ Highland - 2 (Lake)

All results DRAFT until final review / publication.

[select another block](#)

SUMMARY:

1 total species: 1 CO,
3 species in IN1985

Results last updated: 25 Nov 2009

Species List

Species	Best Evidence	Other details	IN1985
Pied-billed Grebe	● CO FL		
Killdeer			● CO
Upland Sandpiper			● CO
Bell's Vireo			⊗ PO

Arrangement of blocks:

1 (NW)	2 (NE)
3 (CW)	4 (CE)
5 (SW)	6 (SE)

select a block

(select a Quad first)

OR block code:

'Quad' is used here for topographic quads or other larger units containing survey blocks.

Back to [Indiana 2005-2010](#) | [Results Menu](#)

Related topics: [Results for Lake County](#)

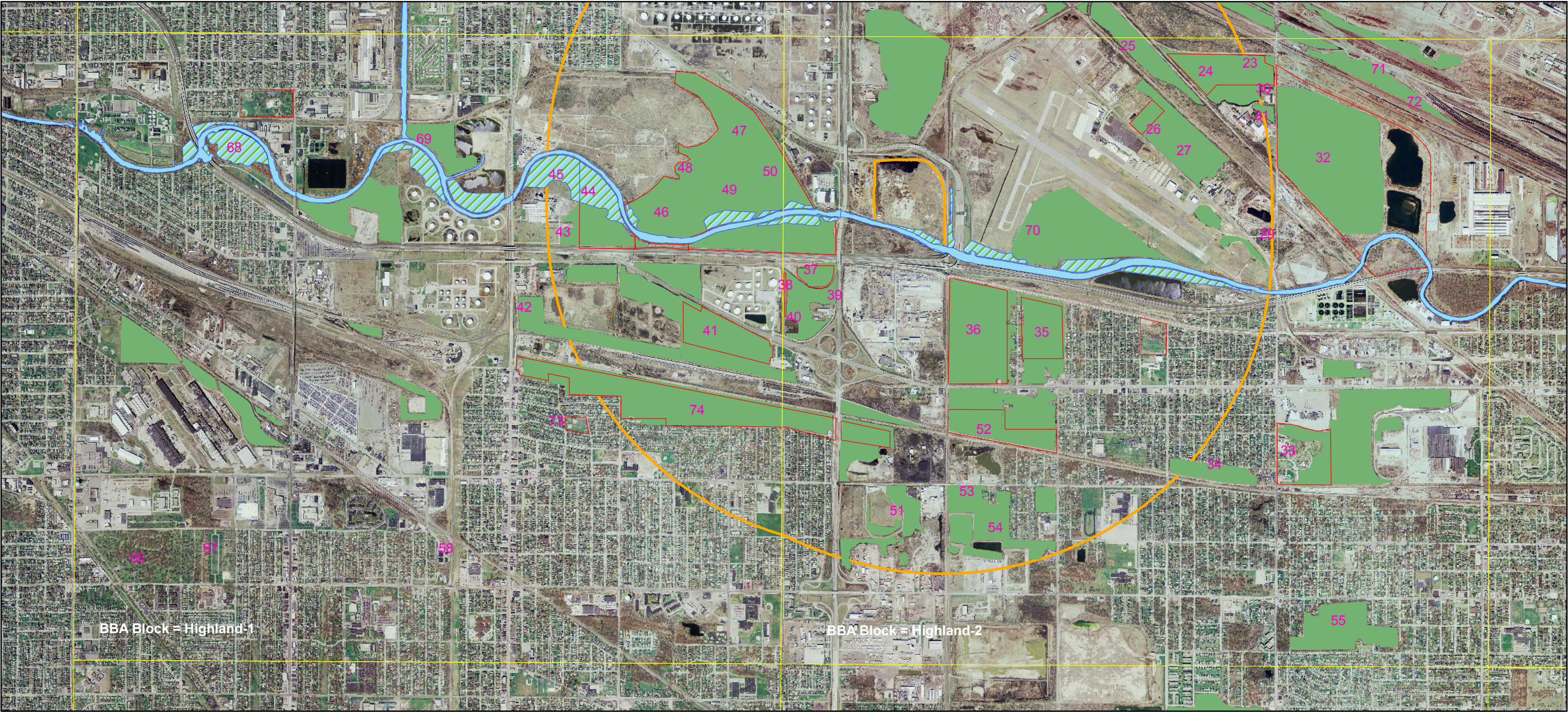
Help & Hints for atlases in progress

- Only reviewed data are shown in public results.
- This page may show no results (0 species) for the current atlas, but have lots of results from a previous atlas.
- For atlas participants, the Block Sightings Detail Report may be more useful and includes all species, even those not finalized or reviewed.

Patuxent Wildlife Research Center, part of the [U.S. Geological Survey](#) (USGS), and [National Biological Information Infrastructure](#) provide the BBA (Breeding Bird Atlas) Explorer in cooperation with the atlas project sponsors.

Figure 2. Breeding Bird Atlas 2005 – 2010 draft results for Highland-2 Block.

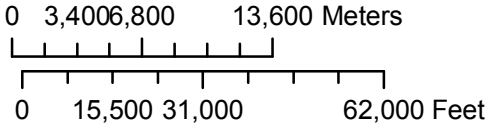
Figure 3. General Locations of Rare, Threatened and Endangered Specied within BBA Blocks Highland-1 and Highland-2, Lake County, Indiana.



This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Mapped By:
Dr. Jim Smith, Office of Land Quality - NRD Program
Date:03/25/2010

Sources:
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83



- Legend**
- AOC_boundaries
 - blocks_pub2
 - GCR_IHC_IH
 - Managed_Lands
 - AOC-Dune&Swale
 - Riverine Wetlands_GD_Site
 - Gary_Development_with_buffer



- BBA HOME**
- IN2005 BBA**
- Home**
- Methods**
- Special Area List**
- Species Info**
- Results**
- by Species**
- by Block**
- by Region**
- All Species**
- Summary**

Results by Block

Draft Results Summary for 8321/ Highland - 1 (Lake)

All results DRAFT until final review / publication.

[select another block](#)

SUMMARY:

0 total species:

6 species in IN1985

Results last updated: No results so far for current atlas block.

Species List

Species	Best Evidence	Other details	IN1985
Least Bittern			⊗ PO
Common Moorhen			● CO
American Coot			● CO
Black Tern			● CO
Marsh Wren			ⓘ PR
Yellow-headed Blackbird			ⓘ PR

Arrangement of blocks:

1 (NW)	2 (NE)
3 (CW)	4 (CE)
5 (SW)	6 (SE)

select a block

(select a Quad first)

OR block code:

'Quad' is used here for topographic quads or other larger units containing survey blocks.

[Back to Indiana 2005-2010 | Results Menu](#)

Related topics: [Results for Lake County](#)

Help & Hints for atlases in progress

- Only *reviewed* data are shown in public results.
- This page may show no results (0 species) for the current atlas, but have lots of results from a previous atlas.
- For atlas participants, the Block Sightings Detail Report may be more useful and includes all species, even those not finalized or reviewed.

Figure 4. Breeding Bird Atlas 2005 – 2010 draft results for Highland-1Block.

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